



THE UNIVERSITY OF
CHICAGO
UChicago Medicine

Department
of Medicine

2018

DEPARTMENT OF MEDICINE ANNUAL REPORT

PUSHING
THE
BOUNDARIES

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CHAIRMAN'S MESSAGE

I am delighted to present to you the 2018 Department of Medicine Annual Report entitled **“Pushing the Boundaries”**.

This past academic year the Department of Medicine achieved major successes in our tripartite mission by pushing our fundamental understanding of solutions to improve patient care, drive scientific advances to help us find innovative ways to diagnose and treat disease, and train the next generation of physician scientists. Medicine investigators translated discoveries into game changing immunotherapies to fight blood, prostate, head and neck, breast and lung cancers, and developed innovative therapeutic strategies for the treatment of celiac disease, asthma and IBD. Big data, machine learning, and telehealth also serve as examples of how the Department is pushing technology to advance medicine, outcomes and population health. Relating to improved patient care, the Department expanded our presence at several offsite locations and celebrated the opening of the city of Chicago's newest and most advanced adult emergency department which serves as the primary entry point for the institution's new Level 1 Trauma Center for patients on the South Side. Within our training programs educators in the Department of Medicine continued to develop novel learning systems and programs for our trainees and junior faculty.

Other notable departmental highlights from this past year include:

- The appointment of six new administrative leaders: Yoav Gilad, PhD as Vice Chair for Research, Steven White, MD as Vice Chair for Appointments and Promotions, Stacie Levine, MD as Chief of the Section of Geriatrics & Palliative Medicine, Diana Bolotin, MD, PhD as interim Chief of the Section of Dermatology, Anne Sperling, PhD as Associate Vice Chair for Research and Julie Oyler, MD as Chair of the Women's Committee
- Recognition of six of our faculty with named professorships from the University: Thomas Gajewski, MD, PhD as the AbbVie Foundation Professor of Cancer Immunotherapy; Bana Jabri, MD, PhD as the Sarah and Harold Lincoln Thompson Professor; Louis Philipson, MD, PhD as the James C. Tyree Professor in Diabetes Research & Care; Sonali Smith, MD as the Elwood V. Jensen Professor; Nir Uriel, MD as the Louis Block Professor, and Keyoumars Soltani, MD as the Allan L. Lorincz Professor
- National recognition for the work of many individuals including diabetes (Louis Philipson, MD, PhD) health disparities (Marshall Chin, MD), breast cancer (Olufunmilayo Olopade, MD) and geriatric emergency medicine (Teresita Hogan, MD)
- Increased grant funding including the renewal of three center grants: the Comprehensive Cancer Center, the Institute for Translational Medicine and the Diabetes Research & Training Center
- National recognition as one of the safest hospitals in the country with the University of Chicago Medicine garnering straight A's for the 13th consecutive time by the prestigious and independent Leapfrog Group

I am proud to lead a Department that is comprised of outstanding clinicians, scientists and teachers who continue to push the boundaries of what we know in order to achieve major advancements in medicine. I thank them for their dedication to our tripartite mission.



Everett E. Vokes, MD
John E. Ulmann Professor
Chair, Department of Medicine
Physician-in-Chief,
University of Chicago Medicine &
Biological Sciences

Organization

	Chairman, Department of Medicine	Everett E. Vokes, MD	
Executive Committee:	Vice Chair of Appointments & Promotions	Steven White, MD*	
	Vice Chair of Education	John McConville, MD	
	Vice Chair of Faculty Development	Deborah Burnet, MD	
	Vice Chair of Research	Yoav Gilad, PhD	
		Bana Jabri, MD, PhD	
		Julian Solway, MD	
	Associate Vice Chair – Appointments & Promotions	Dorothy Hanck, PhD*	
	Associate Vice Chair – Ambulatory Operations	Lisa Vinci, MD	
	Associate Vice Chair – Quality	Andrew Davis, MD	
	Associate Vice Chair – Research	Anne Sperling, PhD	
	Executive Administrator	Julie J. White	
	Associate Executive Administrator	James Manthey	
Section Chief Council:	Cardiology	James Liao, MD	
	Computational Biomedicine & Biomedical Data Science	Robert Grossman, PhD & Andrey Rzhetsky, PhD	
	Dermatology	Diana Bolotin, MD, PhD (interim)	
	Emergency Medicine	Linda Druelinger, MD	
	Endocrinology, Diabetes & Metabolism	Ronald Cohen, MD	
	Gastroenterology, Hepatology & Nutrition	David Rubin, MD	
	General Internal Medicine	Deborah Burnet, MD	
	Genetic Medicine	Yoav Gilad, PhD	
	Geriatrics and Palliative Medicine	Stacie Levine, MD	
	Hematology/Oncology	Walter Stadler, MD	
	Hospital Medicine	David Meltzer, MD, PhD	
	Infectious Diseases & Global Health	David Pitrak, MD	
	Nephrology	Arlene Chapman, MD	
	Pulmonary/Critical Care	Gokhan Mutlu, MD	
	Rheumatology	Marcus Clark, MD	
	Committee Chairs:	Diversity Committee	Monica Vela, MD
		Women's Committee	Julie Oyler, MD
Chief Residents:	2018 Chief Residents	Amrish Deshmukh, MD Abdul Dia, MD Michelle Fletcher, MD Erica MacKenzie, MD	
	2019 Chief Residents	Lauren Feld, MD Sarah Gray, MD Marie McKinnon, MD David Tehrani, MD	
Senior Management:	Budget and Finance	Sunila Goel	
	Clinical Revenue and Billing	Lisa Kogan	
	Clinical Research Support	Allison Buonamici	
	Clinical Trials Financial Group	Ashley Hoambrecker	
	Human Resources (Academic)	Sharon Frazier	
	Human Resources (Staff)	Chris Yaros	
	Information Systems	Max Marchevsky	
	Research Administration	Katie Pizer	

*New in FY19

By the Numbers

15

Subspecialty Sections

Educational Activity

304 Trainees
178 Residents
126 Subspecialty Fellows

Clinical Activity

14,326 Admissions
199,144 Onsite Visits
25,467 Offsite Visits
63,552 Emergency Room Encounters
1,174,805 RVU's

325

Transplant Cases

141 Bone Marrow Transplants
72 Kidney Transplants
31 Heart Transplants
26 Liver Transplants
23 Lung Transplants
28 CAR T-Cell
3 Pancreas Transplants
1 Kidney/Pancreas Transplants

317 Faculty

Research Activity

#26 in NIH funding (2017)
\$83.3M Total NIH Awards
\$27.5M Clinical Trials Earnings
\$127M Total Sponsored Research Awards & Clinical Trial Earnings

Special Awards 2018

Elected Fellows of the American Academy of Arts and Sciences

Graeme Bell, PhD
Olufunmilayo Olopade, MD

Elected Members of the Association of American Physicians

Michael A. Becker, MD
Eugene Chang, MD
Arlene Chapman, MD
Marcus Clark, MD
Fredric Coe, MD
Alan Leff, MD
Bana Jabri, MD, PhD
James Liao, MD
David Meltzer, MD, PhD
Olufunmilayo Olopade, MD
Kenneth Polonsky, MD
Mark J. Ratain, MD
Samuel Refetoff, MD
Mark Siegler, MD
Julian Solway, MD
Everett Vokes, MD

Elected Members of the American Society for Clinical Investigation

Marisa Alegre, MD, PhD
Vineet Arora, MD
Michael A. Becker, MD
Eugene Chang, MD
Marcus Clark, MD
Fredric Coe, MD
Suzanne Conzen, MD
Elbert Huang, MD, MPH
Thomas Gajewski, MD, PhD
Lucy Godley, MD, PhD
Harvey Golomb, MD
James Liao, MD
Alan Leff, MD
David Meltzer, MD, PhD
Gokhan Mutlu, MD
Olufunmilayo Olopade, MD
Kenneth Polonsky, MD
Samuel Refetoff, MD
Julian Solway, MD
Everett Vokes, MD

Elected Members of the National Academy of Medicine

Graeme Bell, PhD
Marshall Chin, MD*
Robert Gibbons, PhD
David Meltzer, MD, PhD
Olufunmilayo Olopade, MD
Kenneth Polonsky, MD

American College of Physicians Masters

Mark Siegler, MD

Department of Medicine Named Professorships

Graeme Bell, PhD – Kovler Family Distinguished Professor
Eugene Chang, MD – Martin Boyer Professor
Marshall Chin, MD – Richard Parillo Family Professor in Healthcare Ethics
Thomas Gajewski, MD, PhD – AbbVie Foundation Professor*
Robert Gibbons, PhD – Blum Riese Professor
Harvey Golomb, MD – Lowell T. Coggeshall Professor
Robert Grossman, PhD – Frederick H. Rawson Professor
Bana Jabri, MD, PhD – Sarah & Harold Lincoln Thompson Professor*
James Liao, MD, PhD – Harold H. Hines, Jr. Professor
Michelle Le Beau, PhD – Arthur and Marian Edelstein Professor
David Meltzer, MD, PhD – Fanny L. Pritzker Professor
Olufunmilayo Olopade, MD – Walter L. Palmer Distinguished Service Professor
Louis Philipson, MD, PhD – James C. Tyree Professor in Diabetes Research & Care*
Kenneth Polonsky, MD – Richard T. Crane Distinguished Service Professor
Nanduri Prabhakar, PhD – Harold H. Hines, Jr. Professor
Mark Ratain, MD – Leon O. Jacobson Professor
Samuel Refetoff, MD – Frederick H. Rawson Professor
David Rubin, MD – The Joseph B. Kirsner Professor of Medicine
Andrey Rzhetsky, PhD – Edna K. Papazian Professor
Christopher Shea, MD – Eugene J. Van Scott Professor
Mark Siegler, MD – Lindy Bergman Distinguished Service Professor
Keyoumars Soltani, MD – Allan L. Lorincz Professor**
Sonali Smith, MD – Elwood V. Jensen Professor*
Julian Solway, MD – Walter L. Palmer Distinguished Service Professor
Walter Stadler, MD – Fred C. Buffett Professor
Wendy Stock, MD – Anjali Seth Nayak Professor in Leukemia
Nir Uriel, MD – Louis Block Professor*
Eve Van Cauter, PhD – Frederick H. Rawson Professor
Everett Vokes, MD – John E. Ulmann Professor
Irving Waxman, MD – Sara and Harold Lincoln Thompson Professor

*New in FY18

**New in FY19



Awards

Distinguished Service Awards

Joseph B. Kirsner, MD, PhD (2006)
Janet Rowley, MD (2007)
Louis Cohen, MD (2008)
Morton Arnsdorf, MD (2009)
Angelo Scanu, MD (2010)
Keyoumars Soltani, MD (2011)
Jesse B. Hall, MD (2013)
Roy E. Weiss, MD, PhD (2014)
Mark Siegler, MD (2014)
Samuel Refetoff, MD (2015)
Eve Van Cauter, PhD (2016)
Roberto Lang, MD (2017)
Dorothy Hanck, PhD (2017)
Linda Druelinger, MD (2018)
Michelle Le Beau, PhD (2018)

Arthur H. Rubenstein, MD Mentorship Award

Eugene B. Chang, MD (2007)
Julian Solway, MD (2008)
Jesse Hall, MD (2009)
Roberto Lang, MD (2010)
Marshall Chin, MD (2010)
Fredric Coe, MD (2011)
Olufunmilayo Olopade, MD (2012)
Deborah Burnet, MD (2013)
Mary Strek, MD (2014)
David Meltzer, MD, PhD (2015)
Wendy Stock, MD (2016)
Graeme Bell, PhD (2017)
Vineet Arora, MD (2018)

Leif B. Sorensen, MD, PhD Faculty Research Award

Suzanne Conzen, MD (2007)
Marisa Alegre, MD, PhD (2008)
Anne Sperling, MD (2008)
Bana Jabri, MD, PhD (2009)
Eric Svensson, MD, PhD (2010)
Elbert Huang, MD (2011)
Patrick Wilson, PhD (2012)
Konstantin Birukov, MD, PhD (2013)
Lucy Godley, MD, PhD (2013)
John Schneider, MD, MPH (2014)
Yu Ying He, PhD (2015)
Esra Tasali, MD (2016)
Monica Peek, MD (2017)
Yun Fang, PhD (2018)

Diversity Award

Monica Vela, MD (2010)
David Howes, MD (2011)
Blanca Camoretti-Mercado, PhD (2012)
Minoli Perera, PhD (2013)
Monica Peek, MD, MPH (2014)
John Schneider, MD, MPH (2015)
James Woodruff, MD (2016)
Doriane Miller, MD (2017)
Milda Saunders, MD (2018)

Biological Sciences Division Awards

BSD Distinguished Investigator Award – Jane Churpek, MD
Distinguished Leader in Diversity and Inclusion – Karen Kim, MD & Rochelle Naylor, MD
Distinguished Clinician – Joyce Tang, MD
Distinguished Leaders in Program Innovation – Roderick Tung, MD & Jonathan Paul, MD
Distinguished Leader in Community Service and Advocacy – Deborah Burnet, MD & Shellie Williams, MD
Distinguished Educator/ Mentor Award – Wei Wei Lee, MD

Faculty Highlights

Vineet Arora, MD, is an academic hospitalist who studies educational and systems-based interventions to improve quality, safety, and value of care delivered in academic teaching hospitals. She has made significant contributions to the understanding of how to improve the clinical learning environment in academic teaching hospitals, particularly with respect to how to communicate during patient handoffs and resident sleep and fatigue.

Dr. Arora is an internationally recognized expert in patient handoffs, having led the development of guidelines for the Society of Hospital Medicine and serving as an expert reviewer for the creation of a National Handover Guideline for the Irish Health Ministry. She was the first to describe how academic hospitals can standardize handoffs, one of 3 citations in the Accreditation Council of Graduate Medical Education's (ACGME) Pathways to Excellence guide for U.S. academic teaching hospitals undergoing the new Clinical Learning Environment Review. With funding from the Agency for Healthcare Research and Quality, she developed and validated a tool to measure handoff quality that is now the most used handoff tool worldwide. Her work objectively studying the impact of night float and workload on resident sleep and fatigue were the basis of testimony to the Institute of Medicine. Much of her work is cited in the 2009 Institute of Medicine Report on Resident Duty Hours.



Vineet Arora, MD

Professor of Medicine, (General Internal Medicine), Assistant Dean for Scholarship & Discovery at the Pritzker School of Medicine and Director of GME Clinical Learning Environment Innovation at The University of Chicago

Dr. Arora has also made major scientific contributions to understanding sleep in hospitalized patients. With funding from the National Institutes of Aging (NIA), she objectively documented clinically significant sleep loss in hospitalized patients as compared to home, showed hospital noise levels were as loud as a chainsaw at 15 feet, and that hospital sleep loss is associated with both increased morning blood pressure and higher odds of elevated blood glucose ("hyperglycemia of hospitalization") among both diabetic and non-diabetic patients. She is the principal investigator of the NIH/NHLBI-funded SIESTA study (Sleep for Inpatients: Empowering Staff to Act), an interprofessional quality improvement initiative to improve sleep for hospitalized patients.

Recently, Dr. Arora articulated a new model of bridging leadership to align medical education and health system missions to engage trainees in interprofessional teams to improve care. She led the University of Chicago as one of 3 institutions nationwide to receive the American Medical Association's (AMA) Accelerating Change in Medical Education and the ACGME Pursuing Excellence Initiative grants to transform clinical learning environments. In 2018, she was named a Macy Faculty Scholar by the Josiah Macy Foundation for her work to transform interprofessional clinical learning environments via her project entitled IGNITE (Improving GME Nursing Interprofessional Team Experiences). Specifically, she will focus

on matrixed learning experiences between nurses and residents, encouraging interdisciplinary collaboration to reduce patient mortality, medication errors, length of stay, and provider career satisfaction.

As Assistant Dean for Scholarship and Discovery for the Pritzker School of Medicine (PSOM), Dr. Arora leads the required scholarly concentration program that has led to a 30% increase in publication rates and is associated with increased interest in research careers among Pritzker medical students. She also serves as principal investigator of the NIH/NIA T35 grant focused on providing summer training in basic, clinical, and social science research for Pritzker medical students to inspire and prepare them to pursue careers in aging research.

A dedicated mentor and teacher, Dr. Arora has impacted the education and training of dozens of medical students, residents, fellows and junior faculty. She serves as the co-director for the MERITS (Medical Education Research Innovation Technology and Scholarship) fellowship program, mentoring fellows who have chosen to dedicate their careers to medical education research. She is the recipient of numerous mentoring awards including a NIH K24 Mid-Career Mentoring Career Development Award, the Society of General Internal Medicine's inaugural Frederick L. Brancati Leadership and Mentorship Award, and Mid-Career Mentorship Award from Pritzker School of Medicine, most recently, the Department of Medicine's Arthur H. Rubenstein Mentoring Award. Dr. Arora is a Master of the Pritzker School of Medicine's Academy of Distinguished Medical Educators and is a past recipient of the AOA Distinguished Faculty Award.

Dr. Arora's academic contributions have been recognized through elected membership to American Society of Clinical Investigation, and as Master by the Society of Hospital Medicine. She currently serves as Deputy Social Media Editor for the *Journal of Hospital Medicine* and on the Board of Directors for the American Board of Internal Medicine.

Dr. Arora received her MD from Washington University, and is an alumnus of the Department's internal medicine residency program, having served as Chief Resident, and also is a graduate of the University's Harris School of Public Policy.

Lucy A. Godley, MD, PhD, is a physician-scientist focused on understanding the molecular pathways that drive carcinogenesis in the context of hematopoietic malignancies. Dr. Godley is interested in the germline genetic variants that elevate individual and family risk for developing cancers as well as the acquired genetic and epigenetic changes that accompany tumor formation.

Dr. Godley began her scientific career in the laboratories of Drs. Sally and Vincent Marchesi at Yale University (1982-1985) and then as an undergraduate at Harvard University under the guidance of Dr. Don C. Wiley (1986-1988). During the graduate phase of her Medical Scientist Training Program (1988-1995), she conducted research under the tutelage of Dr. Harold E. Varmus at the University of California, San Francisco and the National Institutes of Health. Dr. Godley completed her medical training at Northwestern University (1996-1997), followed by her internal medicine residency training at The University of Chicago (1997-1999). As a clinical hematology/oncology fellow (1999-2003), Dr. Godley conducted her postdoctoral research in the laboratory of Dr. Michelle Le Beau, where she focused her work on determining the molecular basis for the abnormal DNA methylation patterns that characterize human tumors. As a member of the Department of Medicine's faculty since 2003, Dr. Godley's laboratory concentrates on understanding the molecular drivers of tumorigenesis, focusing on germline predisposition to hematopoietic malignancies as well as the role of covalent cytosine modifications in mediating the transcriptional potential of chromatin.

With the Genetic Services Laboratory, Dr. Godley established one of the only clinical pipelines in the world for testing of germline mutations that increase risk for hematopoietic cancers. Along with Dr. Jane Churpek, Dr. Godley provides genetic counseling for patients and families suspected of having a predisposition syndrome, a unique clinical approach that serves as a template for other centers throughout the country. Dr. Godley also receives consultations from doctors and patients throughout the country, and occasionally internationally, to provide genetic counseling and testing. Individuals who test negative for known risk alleles populate Dr. Godley's cohort of families with multiple cases of hematopoietic malignancies, now numbering

Lucy A. Godley, MD, PhD

Professor of Medicine
(Hematology/Oncology) and Human Genetics



more than 1,000. These individuals serve as a vast resource for discovery, already resulting in the publication of two new predisposition syndromes. In addition, the laboratory is invested in ongoing research into the pathophysiology of known genetic susceptibility syndromes. Dr. Godley serves as the Co-Chair of the ClinGen Committee on Myeloid Predisposition Variants, as well as the Friday Scientific Workshop on Inherited Hematopoietic Malignancies, both sponsored by the American Society of Hematology. Dr. Godley's work in inherited leukemias has resulted in a new provisional diagnostic category being added to the latest leukemia classification scheme by the World Health Organization and the inclusion of testing for germline predisposition within the clinical guidelines for diagnosis and management of myeloid malignancies from the National Comprehensive Cancer Network and European LeukemiaNet.

In her epigenetics work, Dr. Godley studies the acquired mutations that occur as people age and as leukemias develop. Dr. Godley uses chemically specific techniques to show that deposition of 5-hydroxymethylcytosine occurs at sites of transcription factor binding to facilitate the expression of new transcriptional programs in response to various stimuli, allowing opening of the chromatin at these sites to facilitate transcription factor binding. In collaboration with Dr. Bana Jabri, Dr. Godley is studying how the microbiota contribute to the expansion of

myeloid cells with acquired mutations in epigenetic genes, which is likely the first step to leukemia development. Dr. Godley hopes that these insights can be used to develop new risk stratification criteria for patients that will allow interventions to slow or even prevent leukemia development.

Dr. Godley is committed to service within the Biological Sciences Division. She served as the Associate Director for Admissions for the Medical Science Training Program from 2011 until this year. Within the University of Chicago Comprehensive Cancer Center, Dr. Godley serves as the Chair of the Scientific and Accrual Monitoring Committee. She also serves as the University's director for the Chicago Biomedical Consortium, which links The University of Chicago, Northwestern University, and the University of Illinois at Chicago in advancing biomedical science for the benefit of Chicago citizens.

As a mentor, Dr. Godley has an outstanding record of guiding young investigators to successful careers in oncology. One of her greatest strengths is her ability to mentor young female physician scientists, where she is an outstanding role-model as a successful woman who is able to effectively balance her career and family. She has an amazing ability to recognize the individual strengths of each of her mentees and then helps guide and push them to achieve their true potential.



RESEARCH PROGRAMS Overview

The Department of Medicine has a long tradition of conducting original and rigorous biomedical and clinical research of fundamental significance. In FY18 Medicine investigators continued to push the boundaries of discovery by conducting highly collaborative, cutting edge research that resulted in multiple new grants and dozens of high impact publications. Furthermore, the Department's history of excellence in training, development and mentorship of bright young scientists resulted in 6 junior faculty investigators earning their first independent NIH research funding, and 5 receiving new individual NIH K awards.

In FY18 faculty in the Department of Medicine acquired 75 new or competitively renewed federal awards resulting in a 30% increase in federal grant funding as compared to the previous year. Among these awards are 2 competitively renewed P30's: The University of Chicago Comprehensive Cancer Center (Michelle Le Beau, PhD - PI) and the Diabetes Research and Training Center (Graeme Bell, PhD - PI), and two competitively renewed P01's focused on infections and the stability of transplantation tolerance (Marisa Alegre, MD, PhD - PI) and the pathogenesis of calcium nephrolithiasis (Elaine Worcester, MD - PI), respectively. Also noteworthy, The University of Chicago-Rush Institute for Translational Medicine (ITM) (Julian Solway, MD -

Founding Director) was also awarded five years of funding totaling \$35M. The ITM is a health research accelerator that develops innovative approaches to advance the science and the practice of clinical and translational research by working hand-in-hand with health stakeholders throughout Chicagoland.

During the past academic year, the Department of Medicine's research portfolio totaled nearly \$84M in federal awards, \$32M in industry funded grants/clinical trial earnings and almost \$12M in non-federal awards. The Department is home to seven NIH funded program or center grants, 12 U-series (cooperative agreements), 11 T series and three K12 training programs. Other federal awards include 51

R series and 24 K (career development) grants. Recognition of the Department's research programs was indicated by the consistent ranking among the top 30 NIH-funded departments of medicine in 2017.

In FY18, the Department conducted more than 1,400 clinical research studies resulting in a record high of \$27.5M in clinical trial earnings. Important clinical research successes include the approval of CAR-T cell therapy for use at the University of Chicago Medicine, and as the first center in the Chicago metropolitan area to have this therapy available as a standard of care. Another significant national clinical trial, known as MOMENTUM 3 and conducted by the Department's heart failure investigators (Nir Uriel, MD - Director), determined that a fully magnetically levitated centrifugal-flow pump was superior to a mechanical-bearing axial-flow pump in patients with advanced heart failure. Results from this work were published in the *New England Journal of Medicine* in 2018.

Over the past year, Medicine investigators led or participated in many collaborative studies and continued to translate basic research to clinical practice with multiple seminal discoveries, publishing over 1600 impactful papers with dozens in high profile journals. For example, scientists elucidated the interaction between clonal hematopoiesis and the microbiome to explain the association

of leukemogenesis and cardiovascular diseases with this age-related phenomenon (Meisel, Jabri, Godley, Barreiro, et al., *Nature*, 2018) and discovered the role of PHGDH in pulmonary fibrosis (Hamanaka, Guzy, Wu, Dulin, Mutlu, *American Journal of Respiratory Cell and Molecular Biology*, 2018). Medicine investigators also developed PD1 pathway-directed agents for cancer immunotherapy (Matson, Gajewski, Alegre, Luke, et al., *Science*, 2018) and provided new insights to further the understanding and therapeutic targeting of genomic heterogeneity in gastro-esophageal cancer (Maron, Catenacci, et al., *Cancer Discovery*, 2018).

The 4th annual Janet D. Rowley Research Day was held on March 6, 2018. The day commenced with an outstanding talk by Mary Armanios, MD, Professor of Oncology at Johns Hopkins University. Following that, 140 junior faculty and fellows participated in a poster event with all subspecialties represented. Best abstract winners in the faculty category include Hatim Hassan, MD, PhD, Megan Huisingh-Scheetz, MD, Milda Saunders, MD and Alexandra Dumitrescu, MD, PhD and Bow Chung, MD, Matthew Krause, PhD, Juan Rojas, MD and James Godfrey, MD in the trainee category.

Recognizing the research success of an outstanding mid-level scientist the Department selected Yun Fang, PhD, assistant professor of medicine, as the recipient of the 2018 Leif B. Sorensen, MD, PhD Faculty Research Award. Dr. Fang's research is focused on pathophysiological mechanisms of vascular diseases, particularly the modulation of vascular health by non-coding genome in the context of cardiovascular complication (atherosclerosis) and pulmonary disease (acute lung injury). In FY18, Dr. Fang was awarded two NIH R01s in support of his innovative work.



2018 Janet D. Rowley Research Day Abstract Winners

Department of Medicine Programmatic Awards:

- Infections and the Stability of Transplantation Tolerance (P01) – **Marisa Alegre, MD, PhD***
- Diabetes Research Training Center (P60) – **Graeme Bell, PhD***
- Inflammatory Bowel Disease and Mucosal Inflammation, Immunology, and Microbiology of the G.I. Tract (P30) – **Eugene Chang, MD**
- Chicago Center for Diabetes Translation Research (P30) – **Marshall Chin, MD & Monica Peek, MD**
- University of Chicago Comprehensive Cancer Center (P30) – **Michelle Le Beau, PhD***
- Integrative Consequences of Hypoxia (P01) – **Nanduri Prabhakar, PhD**
- Pathogenesis of Calcium Nephrolithiasis (P01) – **Elaine Worcester, MD***

SELECT HIGH IMPACT AWARDS*:

- Medical Scientist Training Program – **Marcus Clark, MD**
- Developing and Operating a Data Commons Framework Services – **Robert Grossman, PhD***
- NIAID Data Hub Pilot – **Robert Grossman, PhD***
- NHLBI Commons Pilot – **Robert Grossman, PhD***
- Innovation through collaboration at the intersection of childhood – **Robert Grossman, PhD**
- Cohen Veterans Bioscience Data Commons Grant Agreement – **Robert Grossman, PhD**
- Cook County Colon Cancer Alliance to Reignite and Enhance Screening (CDC) – **Karen Kim, MD**
- University of Chicago Program for Expanded Human Immunodeficiency Testing for Disproportionately Affected Populations in Healthcare Settings in Chicago (CDPH) – **David Pitrak, MD**
- Therapeutic Targeting of Carotid Body Chemoreflex for Sleep Disordered Breathing (UH2) – **Nanduri Prabhakar, PhD**
- Next-Generation Phylodynamics-targeted Partner Service Models for Combined HIV Prevention – **John Schneider, MD***
- WUMER Project – **Renslow Scherer, MD**
- ITM 2.0 Advancing Translational Science in Metropolitan Chicago (UL1) – **Julian Solway, MD***

* Represents \$800K+ in annual total cost funding

+ New/competitively renewed in FY18

A list of the DOM's FY18 Total Sponsored Research Awards can be found at: medicine.uchicago.edu



CLINICAL PROGRAMS Overview



The Department of Medicine's clinical programs demonstrate excellence across a broad spectrum of subspecialty patient care services for the treatment of highly complex diseases and are comprised of clinical innovators who continue to impact patient care with a multitude of groundbreaking therapies and technologies. The most significant highlights from the past academic year include growth in inpatient and outpatient activity, the opening of a new Emergency Department, and expanded presence of Medicine clinicians at offsite ambulatory locations.

The Department of Medicine is an institutional leader as measured by faculty count and physician work RVUs generation, and a major contributor to the overall success of the University of Chicago Medicine (UCM). In FY18, DOM clinical faculty continued to perform at a strong level by generating nearly 1.17 million physician work RVUs (wRVUs), representing a 5% increase over last fiscal year. On the inpatient side, admissions increased 7.2% to approximately 14,300. Supporting the inpatient operations are 40 hospitalists and a team of 6 advanced practice nurses and physician assistants who provide care to a growing volume of patients (110+ per day) at UCM. The Department's on-site outpatient subspecialty practices and primary care visits totaled 199,000 (up 2.6% over last year) while the offsite subspecialty practices at 150 E. Huron and at South Shore Senior Health Center recorded 14,226 and 7,616 visits, respectively. Ambulatory initiatives such as open access clinic spots and strategic use of overbooking rules for clinician templates have increased patient access and contributed to patient numbers and improved patient satisfaction. In addition, the Department's Clinical Operations Committee (Matthew Sorrentino, MD - Director) launched a new monthly provider dashboard, that also resulted in improved patient access. Under Dr. Sorrentino's guidance, a new formal educational curriculum for the cardiac and hematology/oncology services was developed that has resulted in improved housestaff satisfaction.

Gastroenterology procedure volumes totaled nearly 19,000 with the largest increase in interventional procedures, the majority from endoscopic bariatric procedures including endoscopic sleeve gastroplasty. The Department's cardiac programs had a highly successful year with the electrophysiology program showing continued growth of complex ablations for atrial fibrillation and ventricular fibrillation (VT), becoming one of the largest VT ablation programs in the country. The Interventional Cardiology (IVC) Program grew procedural volume by 15%, and for the first time, performed more than 550 percutaneous coronary intervention procedures in one year.

In FY18, UCM performed 315 transplants with bone marrow transplants accounting for about half (141) of the volume. With the FDA's approval of CAR-T cell therapy for adult patients with certain blood cancers, UCM is the first center in the Chicago metropolitan area to have this therapy available as a standard of care. In FY18 a total of 28 CAR T-cell procedures were performed. The Advanced Heart Failure Program performed a total of 31 heart transplants including 2 heart-kidney transplants with a remarkable 100% 1-year survival rate, earning the program the highest transplant score in the state of Illinois.

With leadership from Linda Druelinger, MD and Thomas Spiegel, MD, the Department celebrated the opening of the new Emergency Department (ED) in December, 2017. Since that time, ED visits grew by 6.8% and totaled 70,000. Despite the increase in volume the ED has seen a 20% decrease in diversion hours and a significant decrease in patients left without being seen over the past year allowing physicians to provide much needed care and emergency services to the community and beyond. On May 1, 2018 UCM opened a Level 1 Adult Trauma Center bringing highly skilled trauma care to the South Side of Chicago. Since the opening, the Trauma Center has become one of the busiest in the state of Illinois.

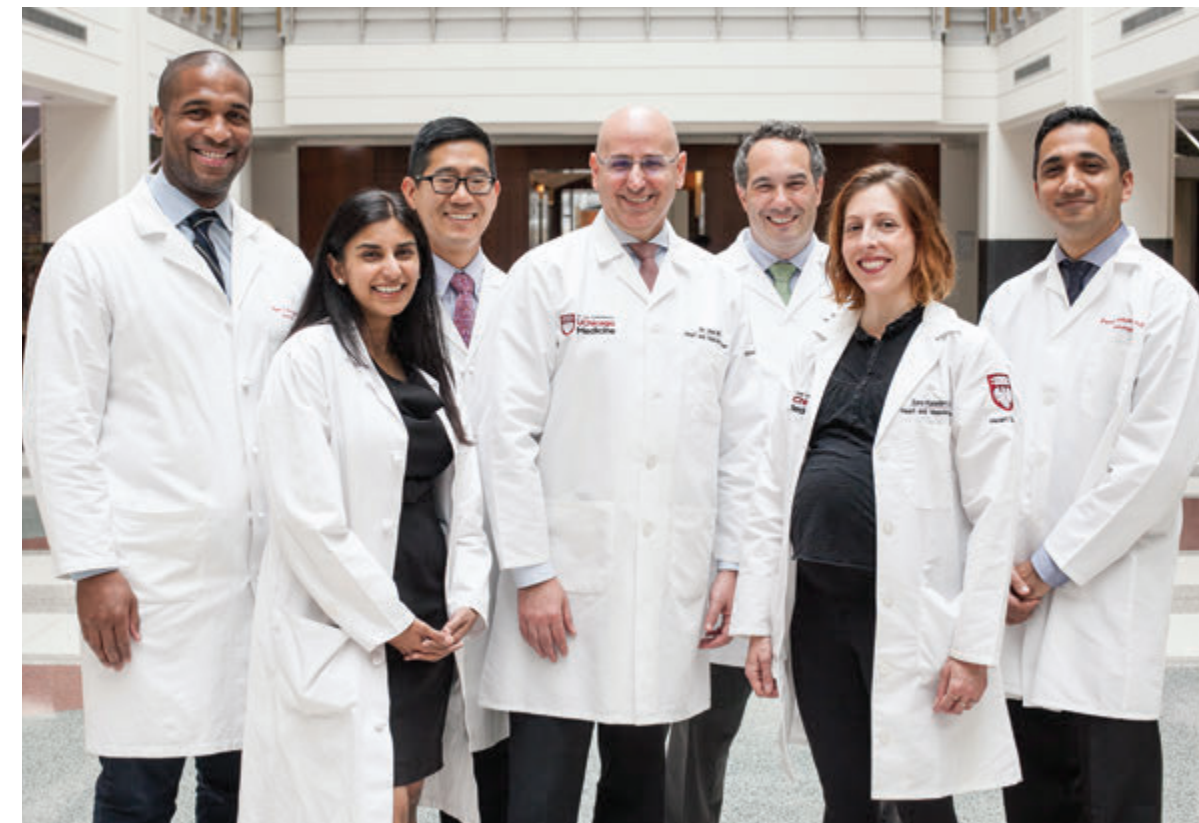
In addition to the expansion of emergency services, the Department increased its clinical footprint in the city and the region with significant presence at the UCM new offsite practices in Orland Park and in Chicago's South Loop that includes clinical programs in cardiology, primary care, oncology, gastroenterology, diabetes and pulmonology, and complement the five ambulatory care centers run by Ingalls throughout the South and Southwest suburbs. In addition, cardiology, GI and liver physicians have increased their clinical services at several satellite clinics in northwest Indiana. The Section of Nephrology's joint venture with DaVita resulted in the opening

of a 5th outpatient dialysis unit, Park Manor, under the direction of Rita McGill, MD. A 6th outpatient dialysis unit, Brighton Park, opened July 2018.

Within the area of clinical research, many of the Department's dedicated clinicians produce practice changing clinical research. The Department has a robust and highly productive therapeutic clinical trials program and broad expertise in drug development, especially targeted therapies. In FY18 the Department conducted more than 1,400 clinical research studies, including nearly 500 industry-funded studies.

In FY18 the University of Chicago Medicine continued to be recognized as one of the safest hospitals in the country for the 13th consecutive time by the prestigious and independent Leapfrog Group. In Leapfrog's semi-annual Hospital Safety Score, UCM garnered "Straight A's" designation for its consistency in delivering the highest level of quality and protecting its patients from preventable medical errors, injuries and infections while in the hospital.

In FY19 the Department looks forward to the opening of the UCM's new ambulatory site at the River East Center that will consolidate the practices at 150 E. Huron and the Obstetrics/Gynecology Streeterville into one location.



Department of Medicine's Advanced Heart Failure Team



EDUCATIONAL PROGRAMS Overview

In an environment supporting cultural diversity and patient safety the Department of Medicine is deeply committed to the education and training of skilled physician scientists and leaders bound for careers in academic medicine. Under the leadership of John McConville, MD, the Department's educational programs continue to successfully prepare trainees for careers in clinical medicine, teaching, and biomedical research. Within the Internal Medicine Residency (IMR) program, 85% of the graduates pursue sub-specialty training. The 2017 fellowship match successfully matched 27 residents into many of the most competitive and premier fellowship programs in the country, including 16 who continued their training at the University of Chicago. Cardiology was the most popular fellowship choice with 7 housestaff matching to outstanding programs across the country. Other frequent fellowship choices included gastroenterology, pulmonary/critical care, hematology/oncology and palliative care.

In FY18, Amber Pincavage, MD and Jason Alexander, MD led the Internal Medicine Intern Selection Committee. An exceptional PGY 1 class of 41 interns was successfully recruited from almost 1,900 applicants. IMR applicants from some of the most prestigious medical schools continue

to be attracted to the rigorous clinical training, diverse patient population and outstanding faculty mentorship. 20% of the new intern class is underrepresented minorities. The Physician Scientist Development Program (PSDP), which is led by James Liao, MD, recruited three outstand-

ing MD/PhDs to continue their residency and fellowship training in cardiology and pulmonary/critical care at the University of Chicago.

Under the leadership of Christine Babcock, MD, MSc, the Emergency Medicine Residency Program continues to provide outstanding clinical training, scholarship opportunities and leadership development for 16 talented Emergency Medicine residents each year. In FY18, an excellent class of 16 PGY 1 interns was recruited from 1,400 applicants representing many of the top medical schools in the country. In addition, 50% of the new intern class are underrepresented minorities. The quality and achievements of the new intern class are remarkable. In addition, 50% of the graduating PGY 3 residents matched in competitive fellowships across the country. The Section of Emergency Medicine continues to expand its own fellowship programs. Top candidates were successfully recruited for the medical education, administration, and global education emergency medicine fellowships. The Section was also approved by the ACGME for the first and only Emergency Medicine Services Fellowship in Chicago. A brand new, state of the art Adult Emergency Department opened in December 2017 and a Level 1 Trauma Center opened on May 1, 2018. Trainees are now provided the opportunity to care for patients afflicted with traumatic injuries. This is an outstanding educa-

tional opportunity for all trainees at the institution and a needed resource for the community.

The Section of Dermatology endeavors to provide excellent resident and fellowship education and training while furthering the field of academic dermatology and delivering comprehensive skin care to a diverse patient population. The Section hosted the annual Chicago Dermatological Society Educational Conference in December, 2017. This event included the Allen Lorincz Memorial Lecture presented by Tammie Ferringer, MD, Section Head, Dermatopathology and Dermatopathology Fellowship Program Director at Geisinger Medical Center in Danville, PA. Dr. Ferringer spoke on clinicopathologic correlations and dermatopathology clues to tissue infections. Dermatology continues to be a highly sought after specialty for trainees. The Dermatology Residency Program, led by Sarah Stein, MD received over 525 applications in 2017, and successfully matched outstanding candidates to each of the three available positions. The Program joined with the IMR Program to offer for the first time a joint preliminary internal medicine/advanced dermatology track to enable candidates to complete internship and specialty training within the institution. The Section hosted a busy elective and observership program reaching 21 Pritzker and visiting medical students on the clinical dermatology elective rotation, 28 Pediatrics, Pathology, and Geriatric residents/fellows on dermatology electives and one visiting resident observer through the Center for Global Health. The Dermatopathology Fellowship (Christopher Shea, MD - Director) attracted dermatology and pathology trained graduates seeking specialty training in dermatopathology, with over 40 applicants for one training position.

In FY18, the Medicine/Pediatrics Residency Program, led by Rita Rossi-Foulkes, MD had another successful match, recruiting 4 top ranked candidates into their 4 open slots. Incoming residents consisted of graduates from the University of Washington, University of Illinois at Chicago College of Medicine, and University of Utah. All are members of the Gold Humanism Honor Society and have been leaders at their respective medical schools and have dedicated themselves to serving vulnerable populations. Strong faculty mentorship by our internal medicine, pediatric and

med-peds faculty along with rigorous training in both disciplines and the diverse patient population attract top applicants. Candidates are also attracted to the LUCENT primary care track and the MedPeds PATHways (Program for Adolescent and Adult Transition to Health) program to improve care of adolescents and young adults with chronic childhood conditions. In FY18, two graduating medicine-pediatric residents completed the MERITS medical education fellowship and one completed the LUCENT track. All four matched at competitive fellowships in palliative care, hematology-oncology, medical genetics and the Epidemiology Intelligence Service, two at the University of Chicago, one at Children's Hospital of Philadelphia-University of Pennsylvania, and one at the Centers for Disease Control.

Honors: The Department of Medicine's extraordinary pool of talented educators continues to be recognized for their excellence in undergraduate and graduate medical education both institutionally and nationally. In FY18, 8 faculty were recognized as "Favorite Faculty" by the Pritzker graduating class, and Scott Stern, MD was honored with the Pritzker Doroghazi Clinical Teaching Award. Vineet Arora, MD was awarded the Department's Arthur Rubenstein Mentorship Award and Wei Wei Lee, MD was the recipient of the Biological Sciences Division's Distinguished Educator (Junior) Award.

The Department of Medicine has a well-established track record of excellence in training, development and mentorship of bright young trainees poised for future leadership in biomedical sciences. In this respect, senior investigators continue to provide a nurturing environment that fosters critical thinking, challenging paradigms, and a collaborative spirit geared toward maximizing the future research potential of each trainee. The Department is the home to several nationally recognized medical research training programs, including 10 NIH-funded training (T32s) grants in cardiology, adult and pediatric endocrinology, oncology, respiratory biology, digestive diseases, mental health and disease, clinical therapeutics, social science and aging, as well as the medical scientist training program. The Department also holds three NIH K12 grants in oncology, HIV-related - cardiovascular disease and sleep disorders and outcomes research and three F series NIH awards.



Division of Biological Sciences Awards:

- Distinguished Educator (Junior) Award – Wei Wei Lee, MD

Department of Medicine Awards:

- Preclinical Teacher of the Year – Jeanne Farman, MD
- Clinical Teacher of the Year – Patricia Kurtz, MD
- Postgraduate Teaching – Monica Malec, MD
- Arthur Rubenstein, MD Mentorship Award – Vineet Arora, MD
- Medicine Resident Teaching Awards:
 - Andrew Aronsohn, MD
 - Michael Broman, MD, PhD
 - Kamala Cotts, MD
 - Patricia Kurtz, MD
- Emergency Medicine Resident Awards:
 - Outstanding Emergency Medicine Faculty Member Clinical Teaching – Michael Hafez, MD
 - Outstanding Emergency Medicine Faculty Member Mentorship – James Ahn, MD
- Resident Research Day 2018
 - Most Outstanding Research Poster – Brian Labadie, MD
 - Housestaff Choice Award – Parita Patel, MD
 - Most Outstanding Clinical Vignette – Anthony Kanelidis, MD

Pritzker School of Medicine Education and Mentorship Awards:

- Doroghazi Clinical Teaching Award – Scott Stern, MD
- LDH Wood Preclerkship Teaching Award – Benjamin Ko, MD & Peter O'Donnell, MD
- Resident Humanism and Excellence in Teaching Award – Natalie Tapaskar, MD
- AOA Award Banquet:
 - Alumni Honoree – Gaurav Upadhyay, MD
 - Faculty Honoree – Audrey Tanksley, MD
- Favorite Faculty Award Winners:
 - Keme Carter, MD
 - Adam Cifu, MD
 - Wei Wei Lee, MD
 - Jason Poston, MD
 - Mindy Schwartz, MD
 - Scott Stern, MD
 - Monica Vela, MD
 - James Woodruff, MD

SECTION OF Cardiology

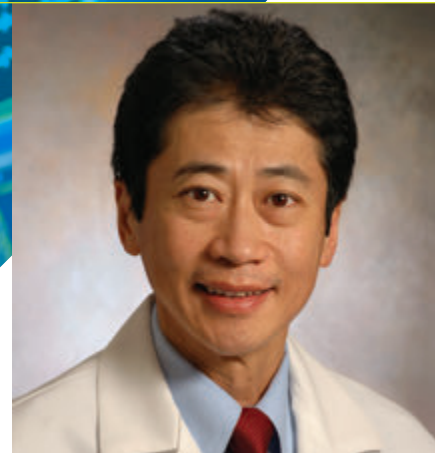
Under the leadership of James K. Liao, MD, the Section of Cardiology continued its strategic growth and development across all missions. In FY18 major sectional accomplishments include the addition of 4 new faculty, expansion of the clinical footprint, and several high impact discoveries.

In FY18 the Section welcomed five junior faculty to enhance its heart failure, electrophysiology and general cardiology programs. Joining the heart failure program were Sarah Kalantari, MD who focuses her work on the management of advanced heart failure patients and invasive hemodynamics, and Bryan Smith, MD, who is interested in heart failure outcomes disparities. Within the electrophysiology (EP) group, Andrew Beaser, MD is interested in risk factors for sudden cardiac death through understanding the mechanisms underlying arrhythmia. In general cardiology, Corey Tabit, MD is a translational physician-scientist with an interest in vascular development, homeostasis, and situational response. Wendy Hernandez, PhD, instructor, focuses her work on the genetics of cardiovascular disease in under represented populations.

On July 1, 2017 Nir Uriel, MD was named as the Louis Block Professor. Dr. Uriel is a nationally recognized

expert in the management of patients with heart failure, heart transplantation and clinical management of circulatory assist devices. He is a leader in the field of mechanical circulatory support, including the use of left ventricular assist devices (LVADs), and in the medical management of patients who need a heart transplant. Dr. Uriel's innovative work has helped redefine current eligibility criteria for advanced heart failure therapy in these high-risk patients. Dr. Uriel's research focuses on the prevention and treatment of advanced heart failure and the care of high-risk transplant patients, such as those who are HIV-positive or who have received significant radiation therapy to the chest during cancer treatment.

Within the clinical programs, the Section continues to push the boundaries of clinical practice with several new initiatives and innovative patient care including the expansion of clinical operations to offsite practice in Orland Park, Little Company



Dr. James K. Liao

of Mary, the South Loop and at 150 E. Huron. In FY18, Tamar Polonsky, MD was named as Director of the General/Preventive Cardiology Program where she developed new collaborations with the Department of Obstetrics & Gynecology (pre-eclampsia/HTN clinic), Women's Health, Vascular Medicine, the Hypertension Clinic and the Lipid Clinic as well as expanding the Cardio-oncology Program (Jeanne DeCara, MD - Director).

The EP Program (Roderick Tung, MD - Director) also had a successful year with continued growth of complex ablations for atrial fibrillation (AF) and ventricular fibrillation (VT), becoming one of the largest VT ablation programs in the country with earned recognition as an epicardial magnet center and designation as the main site for magnetic navigation for VT ablation in the United States.

The Advanced Heart Failure (HF) Program (Dr. Uriel - Director) performed a total of 31 heart transplants including 2 heart-kidney transplants with a remarkable 100% 1-year survival rate, receiving the highest transplant score in the state of Illinois. During the past year, the HF group performed 49 LVADs with a current 1-year survival rate (compiled over the past 4 years) of 84%.

The Interventional Cardiology (IVC) Program (Sandeep Nathan, MD and Atman Shah, MD-Co-Directors) grew procedural volume by 15%, and for the first time, performed more than 550 percutaneous coronary intervention procedures in one year. New initiatives include a Pulmonary Embolism Program with IVC filter placement and the expansion of Pulmonary Embolism Response Team as well as the development of the Chronic Thromboembolic Disease Clinic.

In FY18, the Cardiac Imaging Center (Roberto Lang, MD - Director) continued to experience increased volumes of echocardiograms, with more than 20,000 performed, and cardiac MRIs. The Cardiac Imaging Center continues to develop state of the art imaging technologies such as 4D-MRI flow, novel strain imaging, virtual and augmented reality, live holography, transillumination, CT perfusion, CT-FFR, and fusion imaging. In FY18, the imaging faculty published over 30 peer reviewed journal articles and remained as active participants in major scientific societies and at national meetings.

The Section of Cardiology's translational and clinical research programs are robust and resulted in many high impact publications in FY18. The Advanced HF team produced more than 41 peer-reviewed and review papers over the past year in journals such as *New England Journal of Medicine*, *Journal of Heart and Lung Transplantation* *Nature Review - Cardiovascular Medicine*, *Journal of the American College of Cardiology* and *Circulation*. Clinical research by EP investigators resulted in 2 papers that were among the top 4 notable clinical papers of the year chosen by the Heart Rhythm Society. In new grants, Dr. Liao was the recipient of a NIH R01 investigating mechanisms underlying vascular aging and Dr. Tung received funding to conduct first randomized prospective multi-center VT ablation trial (FACILE VT) and additional funding to conduct first randomized investigational device exemption trial to assess efficacy of septal ablation for hypertrophic cardiomyopathy.

In the educational realm, the Section is home to one of the oldest National Institutes of Health-funded cardiovascular research programs in the nation as well as four ACGME accredited fellowship training programs. The 9th annual Morton F. Arnsdorf Cardiovascular Sciences Research Day featured nearly 106 presentations by faculty and trainees in Cardiology as well as other sections and departments. In FY18, Michael Broman, MD, PhD was recognized for excellence in teaching by the Department of Medicine Residency Program and Gaurav Upadhyay, MD was the recipient of the AOA Alumni Honoree Award from the Pritzker School of Medicine.

Impactful Accomplishments and Discoveries:

• **Francis Alenghat, MD, PhD and Cevher Ozcan, MD** – Recipients of the American Society of Clinical Investigators Young Physician Scientist Award

• **Roderick Tung, MD and Jonathan Paul, MD** – Recipients of the Biological Sciences Division Distinguished Leaders in Program Innovation Awards (Senior and Junior category, respectively)

• **Drs. Michael Davidson, Jeanne DeCara, Roberto Lang, James Liao, Atman Shah, Matthew Sorrentino, Roderick Tung, Nir Uriel, and Parker Ward** – Named as Top Cardiologists by *Chicago* magazine (May 2018)

• **Ilya Karagodin, MD** – Recipient of the 2018 American Society of Echocardiography Council on Vascular Ultrasound Abstract Award

• **Sandeep Nathan, MD** – Appointed as Course Co-Director, C3 (Complex Cardiovascular Catheter Therapeutics) Advanced Endovascular and Coronary Intervention Global Summit

DURING THE PAST YEAR, SECTION OF CARDIOLOGY INVESTIGATORS:

- Redefined hypertension and assessed new guidelines for the treatment of high blood pressure (Bakris, Sorrentino, et al., *New England Journal of Medicine*, 2018)
- Found that people living in areas that restrict trans fats in foods had fewer hospitalizations for heart attack and stroke compared to residents in areas without restrictions (Brandt, Polonsky, et al., *JAMA Cardiology*, 2017). This paper received widespread media attention and earned The International Society of Pharmacoeconomics and Outcomes Research Award for Excellence in Application in Pharmacoeconomics and Health Outcomes Research.
- Determined that a fully magnetically levitated centrifugal-flow pump was superior to a mechanical-bearing axial-flow pump in patients with advanced heart failure (Mehra, Uriel, MOMENTUM 3 Investigators, et al., *New England Journal of Medicine*, 2018)
- Found that mechanical chest compressions improve rate of return of spontaneous circulation and allow for initiation of percutaneous circulatory support during cardiac arrest in the cardiac catheterization laboratory (Venturini, Shah, Nathan, Paul, Blair, et al., *Resuscitation*, 2017)
- Determined that platelet ROCK2 plays important role in platelet function and thrombosis, but does not contribute to the pathogenesis of atherosclerosis and vascular remodeling (Sladojevic, Liao, et al., *Cardiovascular Research*, 2017)
- Used high-resolution multielectrode mapping to gain new insights into atrial activation during typical atrioventricular nodal reentrant tachycardia (Chua, Tung, et al., *Heart Rhythm*, 2018) and developed criteria for His-bundle pacing (Pugazhendhi, Lustgarten, Tung, et al., *Heart Rhythm*, 2018). This paper earned notable paper recognition from the Heart Rhythm Society.

Professors:

James Liao, MD (Chief)	Cevher Ozcan, MD
Jeanne DeCara, MD	Jonathan Paul, MD
Dorothy Hanck, PhD (Emeritus)	Tamar Polonsky, MD, MSCI
Roberto Lang, MD	Jayant Raikhelkar, MD
Victor Mor-Avi, PhD*	Nitasha Sarswat, MD
Matthew Sorrentino, MD	Gabriel Sayer, MD
Nir Uriel, MD	Bryan Smith, MD
Parker Ward, MD	Corey Tabit, MD, MBA, MPH
	Gaurav Upadhyay, MD

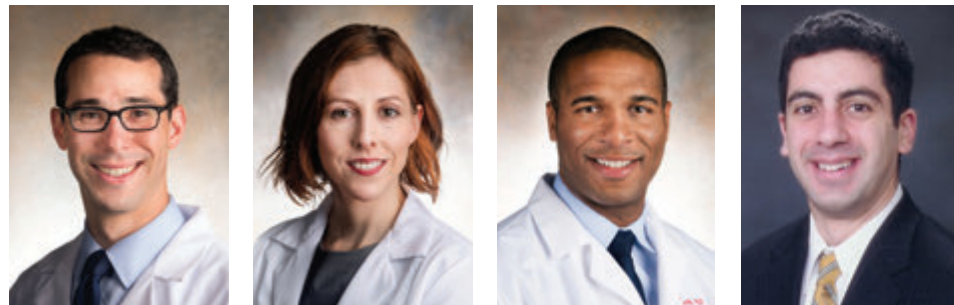
Associate Professors:

Sandeep Nathan, MD, MSc	Rongxue Wu, PhD*
Hemal Nayak, MD	
Amit Patel, MD	
Atman Shah, MD	
Roderick Tung, MD	

Assistant Professors:

Karima Addetia, MD	Ankur Shah, MD
Francis Alenghat, MD, PhD	Evan Stein, MD
Zaid Aziz, MD	
Andrew Beaser, MD	
John Blair, MD	
Michael Broman, MD, PhD	
Sara Kalantari, MD	
Gene Kim, MD	

*Research track faculty



Dr. Andrew Beaser
Dr. Sarah Kalantari
Dr. Bryan Smith
Dr. Corey Tabit

SECTION OF

Computational Biomedicine and Biomedical Data Science



Dr. Robert L. Grossman
Dr. Andrey Rzhetsky

The Section of Computational Biomedicine and Biomedical Data Science was established in October 2016 under the leadership of Robert Grossman, PhD and Andrey Rzhetsky, PhD. Dr. Grossman, the Frederick H. Rawson Professor, Professor of Computer Science and Chief Research Informatics Officer of the Biological Sciences Division, is an expert in translational data science and its applications to biology, medicine and healthcare. Dr. Rzhetsky, the Edna K. Papazian Professor, is an expert in computational analysis of complex human phenotypes.

In FY18, Dr. Grossman established an architectural framework called the Data Commons Framework (DCF) for the National Cancer Institute's Cancer Research Data Commons (CRDC), a collection of data commons spanning not only cancer genomics, but the broad types of data relevant to cancer research, including proteomics, immune-oncology, cell atlases and imaging. The DCF is a set of software services to aid in the development, operation, and interoperation of data commons, data clouds, knowledge bases, and other resources for managing, analyzing, and sharing cancer research data that are part of the CRDC. The CRDC is an example of a data ecosystem recommended by the Cancer Moonshot Blue Ribbon Panel report from 2016 to enable all participants "across the cancer research and care continuum" to "contribute, access, combine and analyze diverse data." The CRDC is an important first step towards a cancer data ecosystem. To that end, Dr. Grossman reviewed approaches for building cancer data ecosystems and recent progress in an article published in the *Cancer Journal: The Journal of Principles and Practice of*

Oncology, May/June 2018. Here he also discussed data commons and their potential role in cancer data ecosystems and, in particular, how multiple data commons can interoperate to form part of the foundation for a cancer data ecosystem.

Dr. Grossman continued to lead the development and operations of the NCI Genomic Data Commons, which is a platform for sharing large cancer genomic datasets. During the past year, the GDC was used by over 100,000 researchers. The GDC is also the basis for an ecosystem of bioinformatics applications for analyzing the data it contains. The approach taken by the GDC to support this ecosystem of cancer genomics applications was described in *Cancer Research*, 77(21), 2017.

In FY18, Dr. Rzhetsky, in close collaboration with Ji-Sung Kim from Princeton University, developed a deep learning system for imputing patient's race and ethnicity from their partial medical history. Highlights from this work were reported in *PLoS Computational Biology*, 26(14), 2017. Dr. Rzhetsky also worked closely with Environmental

Protection Agency personnel to examine associations between environmental quality and adult asthma prevalence in the USA. This study found that asthma may be driven by multiple exposures operating in tandem and that worsening overall environmental quality is associated with increasing asthma. Results from this study were reported in *Environmental Research* 166, 2018.

In other collaborative studies, Dr. Rzhetsky worked with Ishanu Chattopadhyay, PhD (Hospital Medicine) and Joshua Elliott, PhD (Computation Institute), and researchers from Microsoft and Columbia University, investigating the source and the mechanistic triggers of the seasonal influenza epidemic in the USA (*Elife*, 2018), and he produced a series of studies regarding modes of inheritance and transmission of *Staphylococcus aureus* skin colonization in human populations in collaboration with pediatricians from Washington University. Data from this study revealed proximity, seasonality, and hygiene practices as key determinants of MRSA colonization in exposed households (*Pediatric Research*, 2018).



Dr. Polonsky honors
Dr. Grossman as the
Frederick Rawson
Professor



Dr. Andrey Rzhetsky

SECTION OF
Dermatology

In March 2018, Diana Bolotin, MD, PhD, Associate Professor of Medicine, was appointed as interim chief of the Section of Dermatology. Dr. Bolotin currently serves as Director of Dermatologic Surgery and Medical Director for Dermatology Ambulatory Practice. Dr. Bolotin's clinical and academic interests span the field of cutaneous oncology and resident education with particular interests in translational research of carcinogenesis, novel skin cancer therapies and advocacy. As a fellowship-trained Mohs micrographic surgeon, Dr. Bolotin has expertise in a wide range of medical and surgical treatments within cutaneous oncology, including Mohs surgery and excision treatments of cutaneous neoplasms. Dr. Bolotin is a recipient of the Medical Dermatology Society Mentorship Award, several Chicago Dermatologic Society research awards and the American Society for Dermatologic Surgery Cutting Edge Research Award and has participated in numerous clinical trials within the field of procedural dermatology. Dr. Bolotin has authored multiple peer-reviewed journal articles and textbook chapters within the field and serves on the editorial boards of the *Journal of the American Academy of Dermatology* and *Dermatologic Surgery*.

FY18 accomplishments for the Section of Dermatology include the appointment of Keyoumars Soltani, MD as the Allan L. Lorincz Professor of Dermatology. Dr. Soltani is an authority on the treatment of skin cancers, cutaneous surgical procedures, graft-versus-host disease and blistering conditions who has served the Department of Medicine, Biological Sciences Division and the University of Chicago with distinction and dedication for nearly 50 years. As a scientist, Dr. Soltani was the first to show that lymphocytes, not polymorphonuclear leukocytes, were initial inflammatory/

immune cells to attack the epidermis in early lesions of psoriasis. Among other discoveries, he developed a new immune diagnostic method for cutaneous lesions of syphilis, introduced the term pemphigoid nodularis, showed that Herxheimer reaction was not complement dependent, and demonstrated that cutaneous lesions in congenital lupus may develop without sun-exposure. His recent work includes a collaborative effort investigating autophagy regulation of inflammation and skin tumorigenesis. Over the course of his career he has contributed to the literature with



Dr. Diana Bolotin

more than 145 scientific papers, 113 abstracts and 7 book chapters. Clinically, Dr. Soltani provides expertise in complex procedural services. He is triple board certified (dermatology, dermatopathology, and dermatologic immunology/diagnostic and laboratory immunology). As an educator, Dr. Soltani has inspired generations of aspiring students to pursue the specialty of dermatology, in some cases guiding them as undergraduates through to advanced clinical fellowships.

As one of the top programs in the nation focused on understanding, diagnosing, and treating the skin and its diseases, the Section demonstrated continued growth in procedural dermatology and in providing the highest quality interpretation of dermatopathology cases in FY18. Additionally, the Section expanded their adult and pediatric dermatologic services to off-site locations at 150 E. Huron, the South Loop, Orland Park, Edwards Hospital and Little Company of Mary Hospital. New clinical initiatives included a new collaboration with the Section of Rheumatology focused on treatment of dermatologic manifestation of rheumatologic conditions, and continued work on the establishment of a Skin Cancer Treatment Center as multi-disciplinary center for skin cancer prevention, detection and treatment.

The Section's investigative programs are focused on the fundamental question of how cells respond to radiation and chemicals from internal or external sources to cause cancer. In FY18, Dr. Yu-Ying He's laboratory continued to investigate the mechanism of global genome nucleotide excision repair (GG-NER) regulation by autophagy, and its impact on UVB-induced



Keyoumars Soltani, MD

skin tumorigenesis and tumor progression with the hope to provide new molecular insights for developing effective GG-NER modulators for cancer prevention and therapy. Dr. He's investigative efforts resulted in a Janet D. Rowley Discovery Award to further her work in defining the role of RNA methylation in melanoma. In the clinical research realm, Sarah Stein, MD and Adena Rosenblatt, MD, PhD are investigating the use of ixekizumab for treatment of pediatric psoriasis.

The Dermatology Residency Program, under the direction of Dr. Stein and associate program director, Dr. Rosenblatt, continues to recruit and train outstanding young dermatologists. The Dermatopathology Fellowship Program also remains strong, providing an excellent training experience to an elite group of dermatologists and pathologists.



FY19 Dermatology
Chief Residents

Professors: Christopher R. Shea, MD Keyoumars Soltani, MD	Clinical Associates: Juliana Basko-Plluska, MD Ashley Feneran, DO John Fox, MD Vivek Iyengar, MD Eduardo Moioli, MD Arlene Ruiz De Luzuriaga, MD, MPH, MBA
Associate Professors: Diana Bolotin, MD, PhD (Interim Chief) Sarah L. Stein, MD Yu-Ying He, PhD	Section Administrator: Kristen Meredith *New FY19 faculty
Assistant Professors: Oluwakemi Onajin, MD* Adena Rosenblatt, MD, PhD	

Accomplishments, Highlights and Discoveries:

- **Diana Bolotin, MD, PhD** – Recipient of an American Society for Dermatologic Surgery Cutting Edge Research Grant
- **Christopher R. Shea, MD** – Recognized by *Chicago* magazine (January 2018) as a Top Doctor
- **Sarah Stein, MD** – Named Senior Faculty Scholar in the Bucksbaum Institute for Clinical Excellence
- Identified a new role of autophagy pathways in inflammation and tumorigenesis (He, et al., *Autophagy*, 2017)
- Conducted a retrospective analysis of 129 patients with squamous cell carcinoma In Situ after diagnostic biopsy that demonstrated that immunosuppressed patients have persistent tumors more frequently after biopsy (Bolotin, et al., *Dermatologic Surgery*, 2017)
- Identified a new post-transcriptional mechanism regulating DNA repair (He, et al., *Nucleic Acids Research*, 2018)

The Section of Dermatology's investigative programs have continued to make key contributions to research in skin conditions, carcinogenesis, and melanocyte differentiation. Significant highlights include:

SECTION OF Emergency Medicine



Dr. Linda Druelinger

Under the leadership of Linda Druelinger, MD, the Section of Emergency Medicine was responsible for two major institutional accomplishments in FY18. After years of planning, the new Adult Emergency Department (ED), (Thomas Spiegel, MD - Medical Director) successfully opened on December 29, 2017. Since that time, the Section has experienced a 6.8% growth in volume with over 70,000 patients presenting to the ED over the past year. Despite the increase in volume, the ED has seen a 20% decrease in our diversion hours and a significant decrease in the left without being seen patients over the past year allowing physicians to provide much needed emergency services to the community and beyond. On May 1, 2018 after nearly one year of planning and the combined efforts of the Section and the Section of Trauma and Acute Care Surgery, University of Chicago Medicine opened a Level 1 Adult Trauma Center bringing highly skilled trauma care to the South Side of Chicago. Since the opening of the Trauma Center, it has become one of the busiest trauma centers in the state of Illinois. To assist with the increased demand for clinical services, the Section welcomed seven new faculty in FY18: Claire Abramoff, MD (Assistant Ultrasound Director); Krystal Baciak, MD (Assistant EMS Medical Director); Nadim Michael Hafez, MD (Assistant Ultrasound Director); Alejandro Palma, MD; John Purakal, MD; P. Quincy Moore, MD and Kimberly Stanford, MD.

In other new clinical initiatives, Teresita Hogan, MD (Director, Geriatric Emergency Medicine) in collaboration with Lauren Gleason, MD (Geriatrics and Palliative Medicine), launched a project to improve ED management and transition of care for older adults presenting to the ED with injuries from a fall. The "falls" project has brought together a multidisciplinary group at UCM, including emergency medicine, geriatrics, physical therapy, social work, and case managers. Additionally, Dr. Purakal, created a public health initiative called UChicago ROCK (Raising Our Community's Knowledge) to help at-risk groups bridge the gaps in their health literacy. ROCK has brought medical students, residents and physicians from UCM to various community centers,

health fairs, and classrooms over the past year in efforts to improve health beliefs and health behaviors.

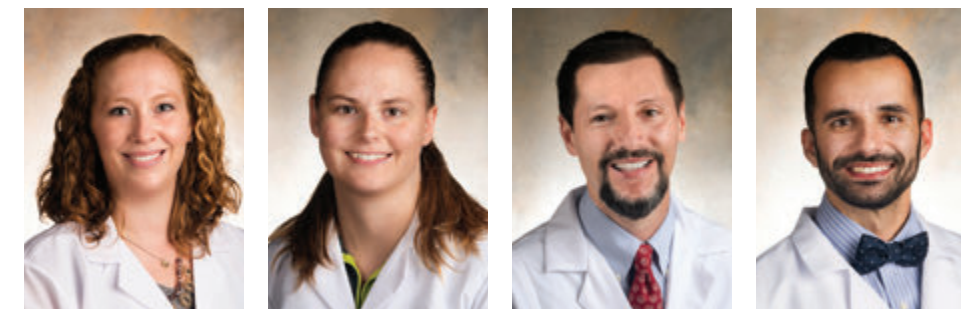
In the research realm, the Section was awarded over \$5M in extramural research funding. New grants in FY18 include a HRSA funded award for Aasim Padela, MD, focused on informing American Muslims about living donation. Within the Center for Oxygen Sensing (Nanduri Prabhakar, PhD - Director) Alfredo Garcia, PhD was the recipient of a NIH funded R01 focused on neuro-cognitive consequences of intermittent hypoxia.

As one of the oldest emergency medicine training programs in the country, the Emergency Medicine

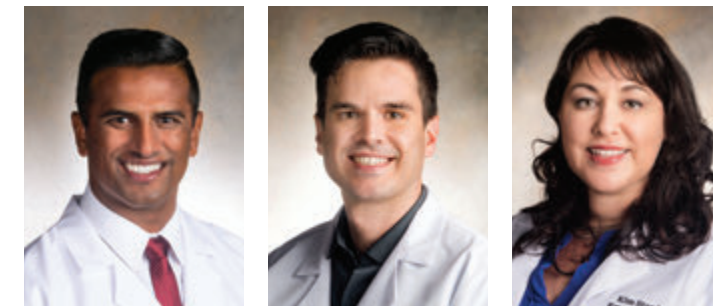
Residency Program (Christine Babcock, MD - Director) continues to attract trainees from outstanding medical schools, many of whom are successful at securing sought after fellowship positions after completing residency training. Relating to the Section's global health programs, Keegan Checkett, MD in her role as Director for the Emergency Medicine Residency Program in Haiti, successfully graduated the first class of EM trained residents in September 2017. James Ahn, MD (Associate Residency Director) and Michael Hafez, MD were honored by the Emergency Medicine residents with the Outstanding Faculty Mentorship Award and Outstanding Clinical Teacher Awards, respectively.

DURING THE PAST YEAR, SECTION OF EMERGENCY MEDICINE INVESTIGATORS:

- Provided evidence that DNA methylation in the central and efferent limbs of the chemoreflex requires carotid body neural activity (Nanduri, Prabhakar, Peng, et al., *Journal of Physiology*, 2017)
- Provided evidence that HIF - 1 alpha is required for disturbed flow-induced metabolic reprogramming in human and porcine vascular endothelium (Wu, Prabhakar, Mutlu, et al., *Elife* 2017)
- Found that Pyruvate dehydrogenase activity improves cardiac outcomes and is a promising therapeutic target for improving post-cardiac arrest resuscitation (Piao, Sharp, et al., *PLoS One*, 2017)
- Investigated the different roles of local and long-range inhibition in the respiratory network and demonstrated that inhibition affects synchrony, period variability, and overall frequency of the preBötC and coupled rhythmic networks (Harris, Shea-Brown, Garcia, et al., *Journal of Neurophysiology*, 2017)
- Developed a conceptual model (reframe, reprioritize, and reform - 3 R's) for religiously-tailored health messages for behavioral change (Padela, Peek, et al., *Social Science & Medicine*, 2018)
- Determined that the use of mechanical chest compressions improved the rate of return of spontaneous circulation and allowed for initiation of percutaneous circulatory support during cardiac arrest in the cardiac catheterization laboratory (Venturini, Shah, Beiser, et al., *Resuscitation*, 2017)
- Suggested the development of an explicit pathway to coordinate the care of heart failure patients in order decrease that population's likelihood of admission without increasing emergency department's disposition times (Speigel, et al., *American Journal of Emergency Medicine*, 2018)
- Suggested communication strategies for improving care of older individuals in the ED (Hogan, Malsch, *Clinics of Geriatric Medicine*, 2018)
- Determined the Cincinnati Prehospital Stroke Scale can identify large vessel occlusion in stroke patients in the prehospital setting (Tataris, Richards, et al., *Prehospital Emergency Care*, 2018)



Dr. Claire Abramoff
Dr. Krystal Baciak
Dr. Nadim Hafez
Dr. Alejandro Palma
Dr. John Purakal
Dr. Quincy Moore
Dr. Kimberly Stanford



Professors:

Linda Druelinger, MD (Chief)
Ira Blumen, MD
David Howes, MD
Jayasri Nanduri, PhD
Nanduri Prabhakar, MS, PhD, MD
James Walter, MD

Associate Professors:

Christine Babcock, MD
David Beiser, MS, MD
Keme Carter, MD
Teresita Hogan, MD
Robert Mulliken, MD
Aasim Padela, MD, MSc
Ying-Jie Peng, MS, PhD

Assistant Professors:

James Ahn, MD
Krystal Baciak, MD
Daniel Bickley, MD*
Keegan Checkett, MD
Navneet Cheema, MD
Alfredo Garcia, PhD
Nadim Hafez, MD
P. Quincy Moore, MD
Adriana Olson, MD*
Nathan Olson, MD*
Alejandro Palma, MD
John Purakal, MD
Daniel Robinson, MD
Willard Sharp, MD, PhD
Thomas Spiegel, MD, MBA, MS
Kimberly Stanford, MD

Katie Tataris, MD, MPH

Clinical Associates:

Diane Chaney, MD
David Harter, MD
Julianne Kjolhede, MD

Medical Education Fellow:

Paul Kukulski, MD

International Medical

Education Fellow:

Nicholas Ludmer, MD*

Administrative Fellow:

Zachary Jarou, MD*

Part time Faculty:

Eric Beck, DO
Andrew Bokarius, MD
Cai Glushak, MD
Thomas Fisher, MD
Vishal Gupta, MD
Kamaldeep Heyer, MD
Marshall Segal, MD
Joshua Sherman, MD

Section Administrator:

Bradford Lane

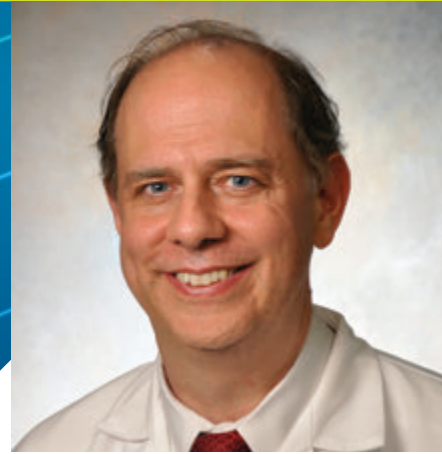
*Research track faculty

*New FY19 faculty

Accomplishments, Highlights and Discoveries:

- **Linda Druelinger, MD** – Recipient of the 2018 Department of Medicine Distinguished Service Award
- **Teresita Hogan, MD** – Recipient of the Academy of Geriatric Emergency Medicine Gerson-Sanders Award; Appointed to the ACEP Board of Governors – Geriatric Emergency Department Accreditation
- **Aasim Padela, MD, MSc** – Appointed as Chair of the Ethics Committee for the Society of Academic Emergency Medicine
- **Willard Sharp, MD, PhD** – Elected to Illinois College of Emergency Physicians (ICEP) Board
- **James Ahn, MD** – Recipient of the 2017 American College of Emergency Physicians National Emergency Medicine Junior Faculty Teaching Award
- **Navneet Cheema, MD** – Recipient of the 2018 Department of Medicine Clinical Service (Evaluation and Management Award)
- **Nanduri R. Prabhakar, PhD** – Presented the plenary lecture "Gasotransmitters and sleep apnea" at the 25th Anniversary of Indian Sleep Society, Goa, India, 2017
- **Christine Babcock, MD** – Elected to Illinois College of Emergency Medicine (ICEP) Board of Directors
- **Alfredo Garcia, PhD** – Named as Councilor for Chicago Chapter of Neuroscience

Endocrinology, Diabetes & Metabolism



Dr. Ronald Cohen

Under the direction of Ronald Cohen, MD, the Section of Endocrinology, Diabetes & Metabolism (EDM) continues to maintain its impressive stature as one of the top adult and pediatric endocrine centers in the nation as well as enjoy great success for its leading edge research in the genetics of diabetes and thyroid disorders and innovative educational programs. The Section's most notable accomplishments in FY18 include recognition of Louis Philipson, MD, PhD, the recruitment of Katie O'Sullivan, MD and the renewal of the Diabetes Research & Training Center grant.

On January 1, 2018, Dr. Philipson was named as the James C. Tyree Professor in Diabetes Research and Care and in May 2018, the Illinois Lincoln Academy honored him as a laureate of the Order of Lincoln, the state of Illinois' highest award, conferred by Governor Rauner. Inspired by his teachers and colleagues at the University of Chicago, Dr. Philipson is a leading authority on the biophysics and genetics of insulin secretion. He is a tireless advocate for all patients with diabetes especially those with type 1 and monogenic forms of diabetes. He identified potassium channels in human insulin secreting cells, elucidated their role through beta cell specific deletions, then developed models for their role in insulin secretion. He co-discovered the first human insulin gene mutations that cause diabetes. With his colleagues Siri Atma Greeley, MD, PhD, Rochelle Naylor, MD and Graeme Bell, PhD, they have contributed to University of Chicago Medicine's (UCM) reputation as the leading center for monogenic diabetes in the United States. He worked with Illinois legislature to pass "Lilly's Law" establishing the first mandated statewide diabetes registry in the United States. Dr. Philipson is President Elect for Science and Medicine of the American Diabetes Association and serves as the Director of the UCM's Kovler Diabetes Center, which

continues to be at the forefront for innovative diabetes research and unparalleled patient care and community-oriented diabetes programs.

In FY18, Katie O'Sullivan, MD joined the faculty of the Section of EDM as assistant professor of medicine. Dr. O'Sullivan is a combined adult and pediatric endocrinologist whose clinical and research interests focus on preventing and managing obesity and type 2 diabetes in children as well as improving the transition of adolescents with endocrine conditions from pediatric to adult healthcare providers. Her prior research investigated the relationship between sleep deprivation in adolescents and cardiovascular outcomes including abnormalities of glucose and insulin homeostasis. In addition, she examined the incidence of obstructive sleep apnea in adolescents with type 2 diabetes.

The Section's internationally recognized investigators have made important scientific contributions that have impacted our understanding of diabetes, thyroid disease, sleep and polycystic ovary disease. In FY18, the Diabetes Research & Training Center (DRTC) (Graeme Bell, PhD - PI), a NIH program first funded in 1977, was successfully renewed for years 41-45. The DRTC is a broad-based interdepartmental and inter-institutional

endeavor that is centered at the University of Chicago with the participation of investigators from local institutions with differing scientific backgrounds, yet sharing a common interest in diabetes and related research. It includes 116 members with the overall goal of promoting new discoveries and translating research findings into novel strategies for the diagnosis, prevention, treatment and cure of diabetes. Other noteworthy grants include the renewal of Dr. Samuel Refetoff's R01 (years 45-49) investigating physiology studies of inherited thyroid disorders and a new K23 award for Rochelle Naylor, MD focused on advancing recognition and personalized genetic medicine for MODY in a multi-ethnic US population.

In FY18, the Section's clinical and outreach programs were highlighted by several new initiatives. Dr. O'Sullivan worked to develop a Family-Centered Obesity Clinic, where she cares for children with obesity and their parents in the same clinical encounter and also worked to improve readiness of adolescent patients with chronic endocrine conditions to transition to adult providers. Celeste Thomas, MD, served as project leader for University of Chicago Medicine's Hypoglycemia Oversight Committee to reduce inpatient insulin-related hypoglycemia.



Dr. Katie O'Sullivan



Drs. Louis Philipson and
Kenneth Polonsky

The Thyroid Study Unit (Samuel Refetoff, MD - Director) continues to work on the identification and treatment of congenital thyroid diseases, in particular those that cannot be managed by simple hormone replacement. In FY18, Dr. Alexandra Dumitrescu's investigative work provided new insights into the role of SBP2 in thyroid homeostasis (Fu, Dumitrescu, et al., *Endocrinology*, 2017) while Dr. Refetoff conducted a study that led to the identification of GLIS3 as a key regulator of TSH/TSHR-mediated thyroid hormone biosynthesis. Results of this study were reported in the *Journal of Clinical Investigation* (Kang, Refetoff, et al., *Journal of Clinical Investigation*, 2017).

One of the unique aspects of the Section is the fully integrated nature of the Adult and Pediatric training programs. With two NIH T32 grants to support training in pediatric endocrinology research and integrated clinical and basic endocrinology, there is no other such program in the United States. The Endocrinology T32 Training Program (Drs. Bell and Refetoff - PI's) completed its 43rd year of training endocrinology researchers and a Pediatric Endocrinology T32 (Dr. Philipson - PI) continues to train pediatric endocrinologists in academic research. The Committee on Molecular Metabolism and Nutrition (Matthew Brady, PhD - Chair) successfully graduated three doctoral students. Within the Pritzker School of Medicine, Tamara Vokes, MD served as course director for the "Using Empathy as a Clinical Tool" elective.

Impactful Accomplishments and Discoveries:

- **George Bakris, MD** - Served as Co-Chair of the Blood Pressure Consensus Panel for the American Diabetes Association
- **Rochelle Naylor, MD** - Recipient of the Biological Sciences Division's Distinguished Leader in Diversity and Inclusion Junior Faculty Award

DURING THE PAST YEAR, SECTION OF ENDOCRINOLOGY, DIABETES & METABOLISM INVESTIGATORS:

- Provided new insights to advance the understanding of the role of SBP2 in thyroid homeostasis and for investigating selenoprotein biology relevant to human disease (Fu, Dumitrescu, et al., *Endocrinology*, 2017)
- Redefined hypertension and assessed new guidelines for the treatment of high blood pressure (Bakris, Sorrentino, et al., *New England Journal of Medicine*, 2018)
- Evaluated the contribution of rare variants to type 2 diabetes and related traits using pedigrees (Jun, Blangero, Bell, et al., *PNAS*, 2018)

Professors:

George Bakris, MD
Graeme Bell, PhD
Antonio Bianco, MD, PhD*
Ali Cinar, PhD*
David Ehrmann, MD
Murray Favus, MD
Louis Philipson, MD, PhD
Kenneth Polonsky, MD
Samuel Refetoff, MD**
Christopher Rhodes, PhD**
Eve Van Cauter, PhD**
Tamara Vokes, MD

Associate Professors:

Ronald Cohen, MD (Chief)
Matthew Brady, PhD
Dianne Deplewski, MD
Manami Hara, PhD*
Silvana Pannain, MD
Ann Zmuda, DPM

Assistant Professors:

Alexandra Dumitrescu, MD, PhD
Siri Atma Greeley, MD, PhD
Erin Hanlon, PhD*
Rochelle Naylor, MD
Katie O'Sullivan, MD
Susan Sam, MD
Celeste Thomas, MD
Christine Yu, MD
Meltem Zeytinoglu, MD

Clinical Associates:

David Same, MD

Section Administrator:

Ann M. Leu

*Research track faculty

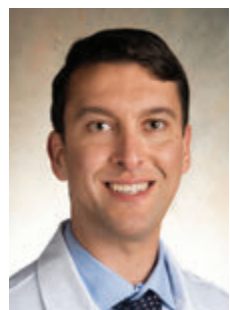
**Emeritus

Section of Gastroenterology, Hepatology and Nutrition

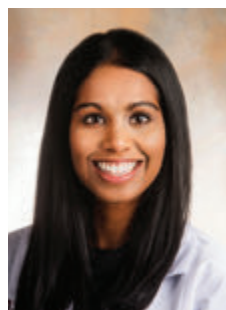
Under the direction of David T. Rubin, MD, the Section of Gastroenterology, Hepatology and Nutrition continued its growth across the clinical, research and educational programs. In FY18, the major sectional accomplishments include a named professorship, the successful recruitment of two clinical faculty, the significant increase in clinical presence at seven of the the University of Chicago Medicine's (UCM) offsite and satellite clinic locations, and the major research contributions that resulted in numerous publications and new grants.

In FY18, Bana Jabri, MD, PhD was named as the Sara and Harold Lincoln Thompson Professor in recognition of her groundbreaking work focused on the study of celiac disease and mucosal immunology, and seminal discoveries relating to the mechanisms underlying the development of complex inflammatory disorders. Her work has led to new insights in determining what triggers the abnormal reaction to gluten in celiac disease and recent

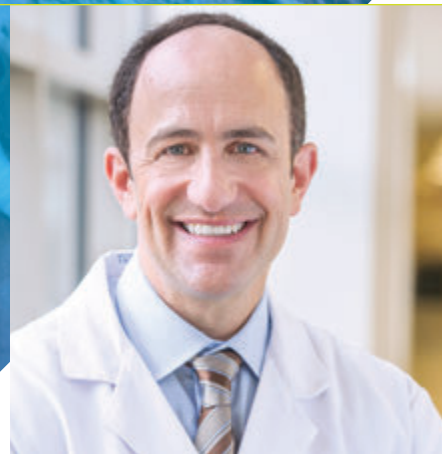
discoveries have demonstrated the possibility that vaccines could one day be used to prevent the disease. Dr. Jabri's revolutionary work includes the discovery that signals from tissue cells control effector immune responses, in particular combinations of stress-induced ligands and IL-15 license cytotoxic T cell to mediate tissue damage. She also identified the mechanism underlying the association between HLA-DQ8 and celiac disease. Her research group went on to develop the first-ever mouse model of celiac disease, which has allowed for the testing of new vaccines and therapeutic strategies. Using this model, her team demonstrated critical roles for both Vitamin A and IL-15 in the pathogenesis of celiac disease. These findings have profound implications not only for celiac disease but also for the fields of both autoimmunity and mucosal immunology, including the engineering of oral vaccinations and understanding how dysregulated immune responses to luminal food antigens can lead to the development of food allergies and inflammatory bowel disease (IBD). Her work has directly led to



Dr. Dejan Micic



Dr. Vijaya Rao



Dr. David T. Rubin

the testing of novel therapies aimed at blocking IL-15 signaling in severe cases of celiac disease.

Also in FY18 the Section welcomed two new faculty: Vijaya Rao, MD and Dejan Micic, MD. Dr. Rao cares for patients with a variety of digestive diseases, with a particular interest in Celiac disease, inflammatory bowel disease, colon cancer screening, and women's health issues within gastroenterology. Since her recruitment, she has contributed to the Section's growth strategy with the GI practices at South Loop and 150 E. Huron. Dr. Micic has a special interest in inflammatory bowel disease and management of gastrointestinal conditions resulting in nutritional disorders such as short bowel syndrome and intestinal malabsorption, and serves as an important contributor of the GI Nutrition and Small Bowel team.

The Inflammatory Bowel Disease Center (Russell Cohen, MD - Director) continues to advance IBD care in the region and as one of the country's pre-eminent programs. IBD care is now available at the Orland Park clinic, expanding the Section's reach to patients in the southwest suburbs. In new initiatives, the Section is currently providing endoscopy services for IBD patients at the 900 N Michigan Surgery Center which allows GI physicians the ability to provide comprehensive care to the IBD patients who are seen at the 150 E Huron ambulatory clinic.

The Liver Transplant Program (Michael Charlton, MD- Director) continues to grow and expand. In FY18 the multidisciplinary Liver Tumor Clinic (Anjana Pillai, MD- Director) saw significant increases in patient volumes. The Center for Liver



Dr. Bana Jabri

Diseases has also opened a Metabolic and Fatty Liver Clinic led by Drs. Charlton and Sonali Paul to improve the coordination of care for hepatology patients. The Center for Liver Diseases has also opened clinics in the South Loop, Orland Park, Hinsdale, and at the 150 E. Huron location. The Section anticipates significant continued growth in their liver and liver transplant volumes in FY19.

The Center for Endoscopic Research and Therapeutics (Irving Waxman, MD - Director) has continued to show significant increases in patient volumes. Much of this has been due to the recent growth of the Endoscopic Treatments for Obesity Program led by Chris Chapman, MD. In FY18, over 75 endoscopic bariatric procedures were performed, including the first endoscopic sleeve gastropasty in Chicago.

With nearly \$9M million in annual research funding, investigations in IBD, immunology, celiac disease, and GI cancer serve as the cornerstone of the Section's research programs. Under the direction of Eugene B. Chang, MD and Dr. Jabri the basic/translational research agenda combines assets of the Biological Sciences Division, Marine Biological Laboratory, and Argonne National Laboratory to investigate the role of the intestinal microbiome that impacts health and disease, gut immune regulation and oral tolerance, genetics, celiac disease, and pathobiology of GI cancers. In FY18, the Section was awarded multiple new federal and non-federal grants studying the microbiome, immunology, and IBD. Marc Bissonnette, MD was awarded a NIH U01 to study the development of 5hmC and 5mC biomarkers in cell-free circulating DNA for sensitive colon cancer detection and prognosis. Sonia Kupfer, MD received an NIH R21 to investigate host-environment interactions in colorectal cancer disparities. Dr. Chang received funding from Takeda entitled "PROMISE" to establish an IBD organoid bank at UCM, and with Dr. Jabri, was awarded a grant from Helmsley Foundation to study aberrant tissue

responses and microbial triggers that promote the development of ulcerative colitis pouchitis.

In the educational realm the Section's training program (Gautham Reddy, MD - Director) had a very successful fellowship match, recruiting five new subspecialty advanced fellows (transplant hepatology, IBD, nutrition, interventional endoscopy). In addition, the Section implemented multiple changes to the curriculum and rotations that will allow the Section to continue to be the leader in developing academic gastroenterologists in the coming years.

Professors:

David Rubin, MD (Chief)	Edwin McDonald III, MD
Eugene B. Chang, MD	Dejan Micic, MD
Michael Charlton, MD	Sonali Paul, MD
Russell Cohen, MD	Joel Pekow, MD
Ira Hanan, MD	Vijaya Rao, MD
Bana Jabri, MD, PhD	Atsushi Sakuraba, MD
Karen Kim, MD	Neil Sengupta, MD
Carol Semrad, MD	Valerie Abadie, PhD*
Helen Te, MD	
Irving Waxman, MD	Instructors:
Charles Winans, MD**	Vanessa Leone, PhD

Associate Professors:

Andrew Aronsohn, MD
Marc Bissonnette, MD
Yanchun Li, PhD
Anjana Pillai, MD
Kapuluru Gautham Reddy, MD
Uzma Siddiqui, MD

Clinical Associates:

Bertram Rogers, MD

Part Time Faculty (Co-appointment with ANL):

Dionysios Antonopoulos, PhD
Folker Meyer, PhD

Assistant Professors:

Christopher Chapman, MD
Sushila Dalal, MD
Murat Eren, PhD
Robert Kavitt, MD
Sonia Kupfer, MD

Section Administrator:

Mark Mitchell

*Research Track Faculty

**Emeritus

Accomplishments, Highlights and Discoveries:

- **Andrew Aronsohn, MD** – Recipient of Department of Medicine 2018 Medical Resident Teaching Award
- **Helen Te, MD** – Appointed by the Bucksbaum Institute for Clinical Excellence as a Senior Faculty Scholar
- **Karen Kim, MD** – Awarded the Biological Sciences Division 2018 Distinguished Leader in Diversity Award
- **Drs. Carol Semrad, Helen Te, Irving Waxman** – Named as Top Doctors by *Chicago* magazine
- **Bana Jabri, MD, PhD** – Recipient of the 2017 Lloyd Mayer Mucosal Immunology Prize

DURING THE PAST YEAR, SECTION OF GASTROENTEROLOGY, HEPATOLOGY AND NUTRITION INVESTIGATORS:

- Demonstrated the importance of microbial signals in the development of pre-leukaemic myeloproliferation prompting new lines of investigation that may profoundly affect the prevention and management of haematopoietic malignancies (Meisel, Jabri, Chang, Eren, et al., *Nature*, 2018)
- Found that small intestine microbiota regulate host digestive and absorptive adaptive responses in dietary lipids (Martinez-Guerrin, Chang, et al., *Cell Host Microbe*, 2018)
- Demonstrated that IgA antibodies reactive to the microbiota are selected for polyreactivity (Bunker, Bendelac, Jabri et al., *Science*, 2018)
- Developed a novel salvage therapy for severe ulcerative colitis (Christensen, Cohen, Rubin et al., *Clinical Gastroenterology & Hepatology*, May 2018)

SECTION OF General Internal Medicine



Dr. Deborah Burnet

Under the leadership of Deborah Burnet, MD, MAPP, the Section of General Internal Medicine (GIM) is comprised of highly talented faculty dedicated to providing exceptional clinical care, teaching and educational program leadership, and conducting impactful research addressing health disparities. The Section is home to several outstanding academic centers including the MacLean Center for Clinical Medical Ethics, Bucksbaum Institute for Clinical Excellence, Chicago Center for Diabetes Translation Research, and the Center for Chronic Disease Research and Policy.

In FY18, several GIM faculty were recognized for their outstanding academic contributions: Marshall Chin, MD, MPH, was elected to National Academy of Medicine for outstanding research in diabetes, and Vineet Arora, MD, MAPP was named as the 2018 recipient of the Department of Medicine's Arthur Rubenstein Faculty Mentorship Award. Six GIM faculty were named to the 2018 "Top Doctors" list by *Chicago* magazine: Drs. Burnet, Diane Altkorn, Kamala Cotts, Mindy Schwartz, Mark Siegler, and Monica Vela.

The Section welcomed five new faculty in FY18. John Flynn, MD, professor of medicine, a general internist and rheumatologist, joined the Biological Sciences Division as the new Chief Physician and Dean for Clinical Affairs after serving as Associate Dean and Executive Medical Director for the Clinical Practice Association at Johns Hopkins University. Nabil Abou Baker, MD, assistant professor of medicine, trained in both internal medicine and pediatrics, focuses on improving pediatric-adult transitions of care for children with chronic illness, such as sickle cell disease. Mim Ari, MD, assistant professor of medicine, has special expertise in opioid use disorder, and with George Weyer, MD, is leading efforts to advance our primary care practice and teaching to address this issue. Milda Saunders, MD, assistant professor

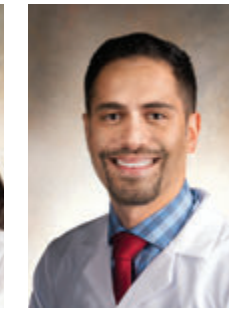
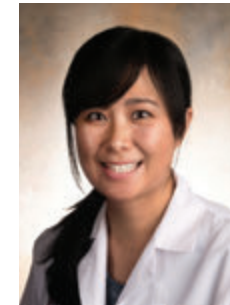
of medicine, studies and cares for patients with chronic kidney disease, to decrease disparities in this population. Elizabeth Tung, MD investigates effects of community violence on health outcomes.

In FY18, GIM faculty were successfully awarded approximately \$4.1M in research funding. New grants include a NIH K24 career development award to Dr. Arora to provide structured mentorship to trainees working on improving sleep health for patients transitioning from hospital to home. Arshiya Baig, MD, MPH received a five-year, \$1.8 million grant from the Department of Health and Human Services (DHHS) Office of Minority Health to improve diabetes care for low-income racial and ethnic minority patients, and Dorianne Miller, MD received a 3 year, \$1M DHHS grant to improve screening and management of patients with serious mental illness in primary care.

GIM faculty are implementing novel community-based research and education to address health disparities. Drs. Chin, Baig, Scott Cook, Elbert Huang, Neda Laiteerapong, Monica Peek and Monica Vela lead an initiative to improve shared decision making between clinicians and LGBTQ patients of color. Drs. Huang and Laiteerapong study diabetes outcomes and cost-effectiveness in patients throughout the US. Drs. Burnet and Anna Volerman work with

local schools to improve health for children with asthma and to decrease obesity through healthy nutrition and exercise in partnership with Pilot Light, a collaborative of Chicago's elite chefs. Drs. Miller and Burnet lead the UC Institute for Translational Medicine Community Cluster, partnering with the Chicago Department of Public Health and colleagues city-wide to promote research to improve Chicago's health. Under direction of Drs. Huang and Laiteerapong, the Center for Chronic Disease Research and Policy held its 5th annual symposium, focused on reforming medicaid, featuring Dr. William Golden, Arkansas Medicaid Medical Director and other national speakers.

Under the direction of Lisa Vinci, MD, MS the Primary Care Group cared for approximately 25,000 patients, providing approximately 55,000 patient encounters during FY18, and GIM is actively supporting the expansion of the UCM primary care infrastructure throughout the South Side. The integrated Behavioral Medicine Unit, led by Dr. Laiteerapong, supports primary care patients working on healthy behavior change and managing conditions such as depression and anxiety. Under the direction of Irsk Anderson, MD, the inter-professional Anti-Coagulation Management Service brings pharmacists into the primary care setting, and trains medical and pharmacy students side by side.



Dr. Mim Ari
Dr. Nabil Abou Baker
Dr. John Flynn
Dr. Milda Saunders
Dr. Elizabeth Tung

The Primary Care Group (PCG) serves as the primary training site for over 130 Medicine and Medicine-Pediatrics residents, as well as our Pritzker medical students. Jennifer Rusiecki, MD, MS led development of the internal medicine residency curriculum in women's health. Dr. Rusiecki worked effectively with interdisciplinary colleagues to build the PCG Women's Health Clinic, integrating long acting reversible contraception including IUDs and contraceptive implants (Nexplanon) in primary care. Dr. Rusiecki also led a 12-week training series through Project ECHO, a video-conference CME platform for regional primary care physicians caring for underserved populations.

The MacLean Center for Clinical Medical Ethics program led by Mark Siegler, MD has trained more than 500 clinical ethicists including 350 physicians since its inception in 1981. This year's MacLean Center lecture series focused on "Ethical Issues in Violence, Trauma, and Trauma Surgery," co-directed by Dr. Siegler and Selwyn Rogers, MD, UCM Trauma Chief. Now in its fourth year, the LUCENT Primary Care Program (Leading Urban Primary Care Education and Transformation) led by Drs. Burnet and Volerman trains and supports primary care residents and faculty as they develop leadership skills and implement practice-based innovation projects.

Professors:

Deborah Burnet, MD, MAPP (Chief)
Diane Altkorn, MD
Vineet Arora, MD, MAPP
Halina Brukner, MD
Marshall Chin, MD, MPH
Adam Cifu, MD
Andrew Davis, MD, MPH
John Flynn, MD
Elbert Huang, MD, MPH
Mindy Schwartz, MD
Mark Siegler, MD
Scott Stern, MD
James Woodruff, MD
Monica Vela, MD
Lisa Vinci, MD, MS

Associate Professors:

Dionne Blackman, MD
Kamala Cotts, MD
Rajlakshmi Krishnamurthy, MD
Wei Wei Lee, MD
David Liebovitz, MD
Doriane Miller, MD
Julie Oyler, MD
Monica Peek, MD, MPH, MS
Amber Pincavage, MD
Rita Rossi-Foulkes, MD, MS
Sachin Shah, MD

Assistant Professors:

Nabil Abou Baker, MD
Jason Alexander, MD

Clinical Associates:

Irsk Anderson, MD
Mim Ari, MD
Arshiya Baig, MD, MPH
Neda Laiteerapong, MD, MSCP
Susan Nasr, MD*
Valerie Press, MD, MPH
Jennifer Rusiecki, MD, MS
Milda Saunders, MD, MPH
Todd Stern, MD
Anna Volerman Beaser, MD
George Weyer, MD

Section Administrator:

Cindy Kitching
*New FY19 Faculty

Accomplishments, Highlights and Discoveries:

- **Anna Volerman Beaser, MD** – Recipient of the 2017 Community Service & Advocacy Award, Midwest Society of General Internal Medicine (SGIM)
- **Amber Pincavage, MD** – Recipient of the 2017 Clinician Educator Award, Midwest SGIM
- **Deborah Burnet, MD, MAPP** – Recipient of the Biological Sciences Division's 2018 Community Service Senior Award
- **Wei Wei Lee, MD** – Recipient of the Biological Sciences Division's 2018 Distinguished Educator Junior Award
- **Patricia Kurtz, MD** – Recipient of the Medical & Biological Sciences Alumni Association's Gold Key Award
- **Milda Saunders, MD, MPH** – Recipient of the Department of Medicine 2018 Diversity Award
- **Jason Alexander, MD** – Appointed as Bucksbaum Junior Faculty Scholar
- **Neda Laiteerapong, MD, MSCP** – Appointed as Bucksbaum Junior Faculty Scholar
- **Arshiya Baig, MD, MPH** – Appointed as Fellow of the Academy of Distinguished Medical Educators

DURING THE PAST YEAR, SECTION OF GENERAL INTERNAL MEDICINE INVESTIGATORS:

- Found that the risk of severe hypoglycemia and achieved glycemic control is essentially the same for basal insulin analogs as the much less expensive NPH insulin (Lipska, Huang, et al., *JAMA*, 2018)
- Found that individualizing glycemic targets can save over \$13,000 per patient annually due to lower medication costs (Laiteerapong, Huang et al., *Annals of Internal Medicine*, 2017)
- Examined early winners and losers in dialysis center pay-for-performance (Saunders, Lee, Chin, *BMC Health Services Research*, 2017)
- Developed and validated a short-form safety net medical home scale (Nocon, Gunter, Gao, Lee, Chin, *Health Services Research*, 2017)
- Described the impact of a scholarly concentration program on student interest in career-long research (Wolfson, Arora, et al., *Academic Medicine*, 2017)
- Reported on the impact of sleep in hospitalized older adults (Stewart, Arora. *Sleep Medicine Clinics*, 2018)
- Demonstrated cost-effectiveness of continuous glucose monitoring for adults with type 1 diabetes (Wan, Skandari, Minc, Huang, et al., *Diabetes Care*, 2018)



Dr. Yoav Gilad

Under the leadership of Yoav Gilad, PhD, the Section of Genetic Medicine made significant progress in its quest to become a leader in translational genetic research at the University of Chicago in FY18. This includes continued expansion of the computational and statistical genetics programs with the recruitment of two additional faculty.

Joining the Section of Genetic Medicine in FY18 were Luis Barreiro, PhD, associate professor of medicine and Yang Li, PhD, assistant professor of medicine. Dr. Barreiro's research is focused on understanding how natural selection has contributed to the evolution of our species and to which extent past selection events impact present-day susceptibility to disease. He studies the genetic basis of differences in immune response among different individuals and human populations as well as the phenotypic evolution of immune responses in primates. Dr. Li's research lies at interface of genetics, gene regulation, and disease. A large part of his work aims to dissect the role of genetic variation on gene regulation at multiple levels. In particular, he develops computational approaches to study genetic effects on gene regulatory mechanisms that have so far been under-appreciated. These include RNA splicing, co-transcriptional dynamics, and post-transcriptional

processes. Dr. Li studies how dysregulation of these processes play roles in complex disease. A second focus of his work is the use of state-of-the-art genomics tools, such as single-cell RNA-sequencing, to understand cellular composition and function in disease progression.

The Section's research portfolio totaling \$4.5M included the addition of 4 new NIH awards in FY18. Dr. Gilad successfully acquired 3 NIH R01s to further his efforts to characterize regulatory noise in single cell RNA sequencing, to characterize and map gene regulatory robustness in cardiomyocytes and to study gene regulatory noise in differentiated cardiomyocytes using single cell technology to identify novel CVD risk loci. Mengjie Chen, PhD was also awarded an NIH R01 focused on advanced statistical methods for single cell RNA sequencing. Other extramural funding include a grant from the Chan Zuckerberg Initiative to support the work



Dr. Luis Barreiro



Dr. Yang Li

of Anindita Basu, PhD to evaluate experimental replicability of high-throughput single cell RNASeq for unbiased cell-type classification.

Section investigators are also among leaders of the NIH's Genotype Tissue Expression project, a large effort to build a comprehensive atlas of genetic effects on gene expression across the human body. In particular, Barbara Stranger, PhD leads the working group focused on sex differences at the gene expression level. Her laboratory is characterizing sexual dimorphism at the transcriptome level within and between tissues, considering both gene-level and transcript-level differences, and characterizing tissue specificity of these patterns. The affected biology is inferred through characterization of dimorphic gene functions, implicated functional pathways, and relationship to disease. Her laboratory has also characterized the extent to which the genetic basis of gene expression differs between males and females.

DURING THE PAST YEAR, SECTION OF GENETIC MEDICINE INVESTIGATORS :

- Demonstrated the importance of microbial signals in the development of pre-leukaemic myeloproliferation prompting new lines of investigation that may profoundly affect the prevention and management of haematopoietic malignancies (Meisel, Jabri, Barriero, et al., *Nature*, 2018)
- Developed a new RNA splicing approach, Leaf-Cutter, to study sample and population variation in alternative splicing that allows for the discovery more sQTLs and improves the interpretation of disease-associated variants (Li, Pritchard, Im, et al., *Nature Genetics*, 2018)
- Applied the phylogenetic scan test for investigating cross-group differences in microbiome compositions using the Dirichlet-tree multinomial model (Tang, Nicolae, et al., *Annals of Applied Statistics*, 2018)
- Determined the genetic basis of anthracycline-cardiotoxicity by molecular response quantitative trait loci mapping in induced cardiomyocytes which could potentially lead to accurate predictions of a patient's response to a particular chemotherapy drug to personalize their cancer treatment (Knowles, Gilad, et al., *eLife*, 2018)
- Developed a new method to accurately estimate the association between gene expression and DNA methylation in tumor samples (Sun, Lin, Chen, et al., *Nucleic Acids Research*, 2018)
- Developed methods to leverage GTEx resources and identify target genes to guide drug discovery, treatment, and prevention strategies (Barbeira, Nicolae, Im, et al., *Nature Communications*, 2018)

Professors:

Yoav Gilad, PhD (Chief)
Dan Nicolae, PhD

Associate Professors:

Luis Barreiro, PhD

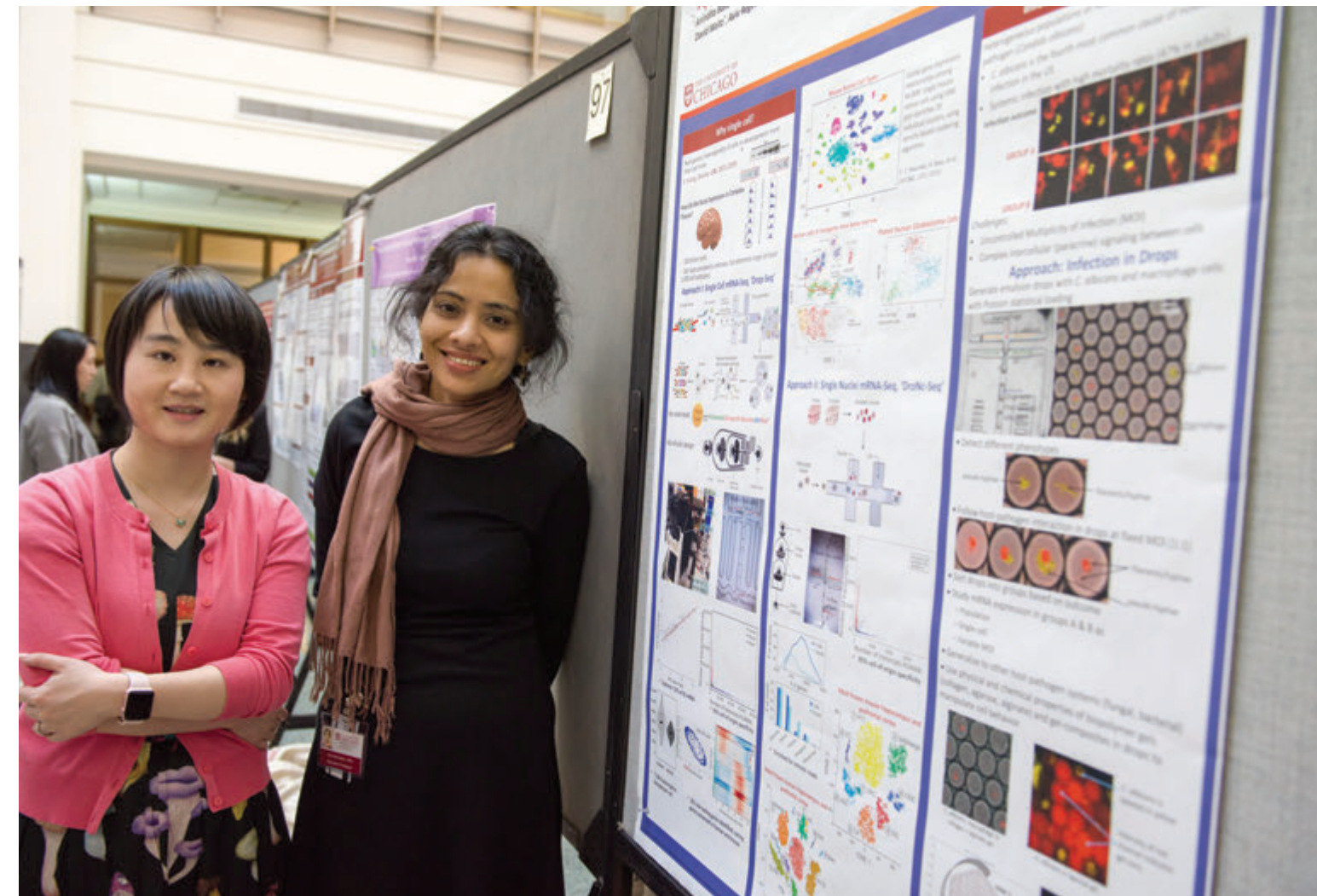
Assistant Professors:

Anindita Basu, PhD
Mengjie Chen, PhD
Hae Kyung Im, PhD
Yang Li, PhD
Barbara Stranger, PhD

Section Administrator:

Ann Leu

Dr. Chen and Dr. Basu



Geriatrics & Palliative Medicine

Under the direction of the newly appointed chief, Stacie Levine, MD, the Section of Geriatrics & Palliative Medicine (GPM) continued its tradition of excellence across the clinical, research and educational missions. In FY18, the Section welcomed Michelle Martinchek, MD and Sandy Tun, MD, assistant professors of medicine, to the faculty. Dr. Martinchek's academic interests are focused on frailty assessment of geriatric patients with a focus on solid organ transplantation while Dr. Tun's expertise lies in the areas of advance care planning and community based outreach.

As the largest independent geriatrics & palliative medicine section/division in Chicago, GPM developed several new initiatives within its clinical programs in FY18 including the addition of an embedded geriatrics clinic in transplant nephrology and a palliative medicine clinic in surgical oncology led by Drs. Martinchek and Tun, respectively. Lauren Gleason, MD continued to work with Teresita Hogan, MD (Section of Emergency Medicine) to improve the evaluation and management of older adults who fall, and is a recent recipient of a funding by the Women's Board at University of Chicago and Academy of Distinguished Medical Educators in support of this work.

The inpatient and ambulatory Oncology Palliative Medicine Programs continue to grow steadily under the direction of Monica Malec, MD who is leading the first integrated mesothelioma program in palliative medicine in the United States. The Cardiac Palliative Service (Charles Rhee, MD - Director) has seen growth as it provides support to patients with advanced heart failure, including patients with left ventricular assist devices. Within the outpatient programs, the nationally recognized SAFE Clinic (Katherine

Thompson, MD and Megan Huisingh-Scheetz, MD - Co-Directors) continues to provide comprehensive geriatric assessment and frailty evaluations for vulnerable older patients as well as serve as a platform for research and teaching efforts. The Specialized Oncology Care & Research in the Elderly (SOCARE) clinic (Selina Chow, MD and James Wallace, MD - Co-Directors) remains an integral centerpiece to geriatric oncologic care in Chicago. New in FY18 was the addition of a pharmacist-driven Hypertension Management Service under the direction of Tia Kostas, MD.

Research efforts by GPM faculty and staff continue to be supported by a variety of external sources. Dr. Thompson is the principal investigator of a HRSA-funded Geriatric Workforce Enhancement Program which created the South Side Healthy Aging Resource Experts (SHARE) Network. In FY18, Dr. Kostas received a HRSA Primary Care Medicine and Dentistry Career Development Award to study primary care medication management for vulnerable populations, and Dr. Huisingh-Scheetz was the recipient of a NIH Chicago Center for Diabetes Translation Research Pilot Award to develop a technology-based



Dr. Stacie Levine



Dr. Michelle Martinchek



Dr. Sandy Tun

program using smart voice to assist homebound older adults and their caregivers in promoting long-term rehabilitation and socialization.

In the educational realm, the Hospice and Palliative Medicine Fellowship (Charles Rhee, MD-Program Director) continues to attract excellent candidates from across the country with over 60 applicants in FY18. The Geriatrics Fellowship Program, led by Dr. Thompson, also attracted top graduates from the internal medicine residency class. Dr. Levine successfully renewed the Interdisciplinary Palliative Medicine Training Program grant with funding from the Coleman Foundation in FY18. Within the Pritzker School of Medicine, Dr. Kostas was appointed as the director of the MS1 Longitudinal Program and was inducted as a fellow in the Academy of Distinguished Medical Educators. Shellie Williams, MD continues to direct the Geriatrics and Aging through Transitional Environments (GATE) Program for medical students.

Dr. Vokes with
Dr. Monica Malec

Dr. Polonsky,
Dr. Soltani and
Dr. Vinci with
Dr. Shellie Williams



Accomplishments, Highlights and Discoveries:

- **Daniel Brauner, MD & Stacie Levine, MD** – Named as Top Doctors by *Chicago* magazine
- **Megan Huisingh-Scheetz, MD** – Recipient of the 2018 Best Abstract Award (Clinical Research) at the Department of Medicine Research Day
- **Lauren Gleason, MD** – Selected to serve on the Public Education Committee for the American Geriatrics Society
- **Stacie Levine, MD** – Appointed as Chair for the Workforce and Leadership Development Strategic Coordinating Committee for the

American Academy of Hospice and Palliative Medicine and accepted as a Fellow in the Drexel University Amerigen Executive Leadership in Academic Medicine program

• **Monica Malec, MD** – Recipient of the 2018 Department of Medicine Postgraduate Teacher of the Year Award

• **Charles Rhee, MD** – Appointed as Chair Elect for the Congestive Heart Failure Special Interest Group of the American Academy of Hospice and Palliative Medicine

• **Shellie Williams, MD** – Recipient of the Biological Sciences Division's Distinguished Community Service and Advocacy Award; appointed as a Junior Faculty Scholar in the Bucksbaum Institute for Clinical Excellence, and selected for the Tideswell National Leadership Development Program in Geriatric Medicine

• **Sandy Tun, MD** – Accepted into the MERITS Faculty Scholars Program

DURING THE PAST YEAR, SECTION OF GERIATRICS & PALLIATIVE MEDICINE INVESTIGATORS:

- Analyzed the relationship between physical activity and frailty among U.S. older adults based on hourly accelerometry data (Huisingh-Scheetz, et al., *Journals of Gerontology*, 2018 (Editor's Choice Article))
- Developed a rules-based algorithm that identified those with the greatest risk of death among a poor prognosis patient group (Bestvina, Polite, Chow, Malec, et al., *Journal of Palliative Medicine*, 2018)
- Contributed to the *Handbook of Geriatric Assessment 5th edition* with the chapter entitled "Emergency Department Assessment at the Time of Hospitalization" (Hogan, Levine, 2018)
- Conducted a feasibility study describing a mixed-methods analysis of nurses' educational needs and barriers to continuing education in a for-profit skilled nursing facility in an underserved, urban environment and proposed mechanisms to overcome barriers including ECHO training and an onsite nurse educator (Thompson, et al., *Geriatric Nursing*, 2018)

Professors:

Stacie Levine, MD – Chief

Associate Professors:

Daniel Brauner, MD
Katherine Thompson, MD, MA

Assistant Professors:

Lauren Gleason, MD, MPH
Megan Huisingh-Scheetz, MD, MPH
Tia Kostas, MD
Monica Malec, MD
Michelle Martinchek, MD
Charles Rhee, MD
Sandy Tun, MD
Shellie Williams, MD

Clinical Associates:

Selina Chow, MD

Secondary

Appointments:
Stacy Lindau, MD, MPH
Tamara Konetzka, PhD

Section Administrator:

Bradford Lane



Dr. Walter Stadler

Under the direction of Walter Stadler, MD the Section of Hematology/Oncology continues to push the boundaries with impactful contributions in clinical medicine, cancer research, and in training the next generation of hematologists and oncologists. Among the many accomplishments this past year, most notable were national and institutional faculty recognition, the recruitment of three junior faculty, the successful renewal of the Comprehensive Cancer Center support grant, and the FDA's approval of CAR-T cell therapy for use at University of Chicago Medicine (UCM), making it the first site in Illinois to offer this pioneering treatment for cancer.

On July 1, 2017 Sonali Smith, MD and Thomas Gajewski, MD, PhD were honored with named professorships. Dr. Smith, the Elwood V. Jensen Professor, is an internationally recognized expert in lymphoma who has made outstanding contributions to the field through her clinical care, education and clinical research. Dr. Gajewski, the inaugural AbbVie Foundation Professor, is a pioneer in the field of cancer immunotherapy who has taken novel approaches to generate improved understanding and new immunotherapies for the treatment of cancer. Other faculty recognized for their outstanding contributions: Wendy Stock, MD was named as the Researcher of the Year from the Leukemia-Lymphoma Society; Olufunmilayo Olopade, MD was the recipient of the Order of Lincoln Award, the State of Illinois' highest honor; Michelle LeBeau, PhD received the 2018 Department of Medicine's Distinguished Service Award; and Jane Churpek, MD was the recipient of the Biological Sciences Division Distinguished (Junior) Investigator Award.

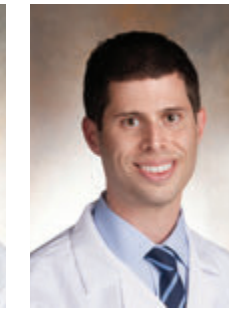
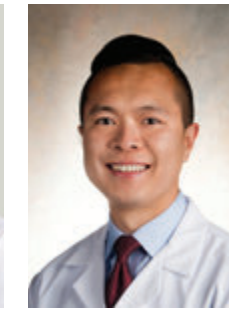
In FY18, three assistant professors joined the Section. Alexander Pearson, MD, PhD performs

basic and translational science research related to why head and neck cancers develop treatment resistance. Chin-Yi (Andy) Liao, MD focuses his efforts on developing novel therapeutic strategies for patients with gastrointestinal cancers, focusing on cholangiocarcinoma and neuroendocrine cancers. Jagoda Jasielec, MD has special expertise in multiple myeloma and lymphoma. Also joining the Section were two instructors: Steven Maron, MD and Randy Sweis, MD.

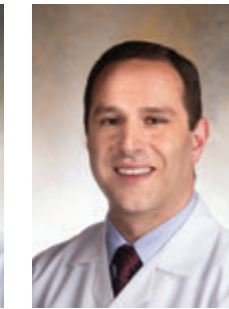
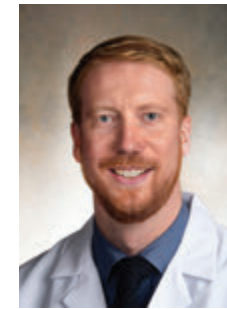
Within the clinical programs, the Section was once again recognized by USNWR as one of the top cancer programs in the nation (August 2018) and over two dozen faculty were named as "Top Cancer Doctors" by *Chicago* magazine (January 2018). In FY18, the Section conducted over 48,000 outpatient visits, accomplished largely as a result of enhanced scheduling and operations under the direction of Olwen Hahn, MD. Noteworthy was the approval of CAR-T cell therapy for use at UCM as the first center in the Chicago metropolitan area to have this therapy available as a standard of care. To that end, the cellular and stem cell transplant program (Michael Bishop,

MD - Director), treated 169 patients, of which 28 received either standard or investigational CAR-T therapies. In other highlights, the Section continued its integration of Silver Cross Hospital and Orland Park into the oncology network, with an overall 11% growth rate in outpatient visits across the network. Also, under the direction of Blase Polite, MD, the Medicare Oncology Care Model, a standardized care pathway and value based model to improve patient centered care, decrease hospitalization, and decrease emergency room use, was successfully rolled out, and the ASCO quality initiatives (QOPI) were integrated across all local and network sites. In new clinical initiatives, Dr. Godley along with Tamara Polonsky, MD and Jeanne DeCara, MD (Cardiology) started a translational clinic focused on clonal hematopoiesis.

The Section maintains a very strong and successful program in basic, translational and clinical research. In FY18 section faculty were awarded approximately \$19.5M in total costs grant funding coupled with an additional \$23M in clinical trial earnings. Most noteworthy was the competitive renewal of the University of Chicago Comprehen-



Dr. Jagoda Jasielec
Dr. Chih-Yi (Andy) Liao
Dr. Steven Maron
Dr. Alexander Pearson
Dr. Randy Sweis



sive Cancer Center grant (Michelle Le Beau, PhD - PI) for years 43-47. Other new grants included a R25 to Eileen Dolan, PhD to establish an innovative program - Chicago EYES on Cancer - for underrepresented high school students and undergraduates, and high school educators who serve underrepresented students from the South Side of Chicago, and a R13 to Dr. Olopade to lead new frontiers in the diagnoses and treatment of inherited cancer syndromes. Jason Luke, MD was the recipient of a Department of Defense award to study genomic and commensal variants associated with immunotherapy response and resistance in cancer patients. Career development awards were awarded to Alexander Pearson, MD, PhD focused on a mathematical modeling approach to combination therapy development in head and neck cancer, and Paul Geeleher, MD to develop novel computational approaches for pharmacogenomic discovery.

The Section continued to expand its clinical trial activity, accruing 1068 patients at UCM and throughout the network into therapeutic trials. Under the direction of Kenneth Cohen, MD and Olwen Hahn, MD the Section continues to run a highly successful fellowship program. The 7 fellows selected annually typically come from the highest ranked residency training programs. For FY18, over 80% of the graduating fellows are starting their careers with an academic affiliation and one is extending her laboratory training as a physician scientist, reflecting success in the strategic goal of training future leaders in oncology. Several fellows and junior faculty and their mentors have earned external training awards in FY18 including Steve Maron, MD and James Godfrey, MD.

Professors:

Walter Stadler, MD (Chief)
Michael Bishop, MD
Suzanne Conzen, MD
Christopher K. Daugherty, MD
M. Eileen Dolan, PhD
Gini F. Fleming, MD
Thomas F. Gajewski, MD, PhD
Lucy A. Godley, MD, PhD
Harvey M. Golomb, MD
Philip Hoffman, MD
Andrzej Jakubowski, MD, PhD
Hedy L. Kindler, MD
Richard A. Larson, MD
Michelle M. Le Beau, PhD
Mark Lingen, DDS, PhD
Olufunmilayo Olopade, MD
Jyoti Patel, MD
Mark J. Ratain, MD
Sonali M. Smith, MD
Wendy Stock, MD
Everett Vokes, MD
Amittha Wickrema, PhD

Associate Professors:

Andrew Artz, MD
Joseph M. Baron, MD
Kenneth Cohen, MD

Olwen Hahn, MD
Dezheng Huo, MD, PhD
Justin Kline, MD
John Moroney, MD
Rita Nanda, MD
Olatoyosi M. Odenike, MD
Peter O'Donnell, MD
Blase N. Polite, MD, MPP
Angela Stoddart, PhD*
Michael J. Thirman, MD

Assistant Professors:

Christine Bestvina, MD*
Daniel Catenacci, MD, PhD
Jane Churpek, MD
Jagoda Jasielec, MD
Satyajit Kosuri, MD
Angela Lager, MD
Chih-Yi (Andy) Liao, MD
Tanguy Lim-Seiwert, MD
Hongtao Liu, MD, PhD
Jason Luke, MD

Akash Patnaik, MD
Alexander Pearson, MD, PhD
Peter Riedell, MD
Russell Szmulewitz, MD
Yonglan Zheng, PhD*

Instructors:

Emily Curran, MD
Michael Drazer, MD*
James Godfrey, MD*
Steven Maron, MD
Randy Sweis, MD

Clinical Associates:

Andrea Amico, MD
Sunila Narula, MD
Brooke Phillips, MD
Shayan Rayani, MD
Ardaman Shergill, MD
Grace Suh, MD
Samir Undevia, MD

Part Time Faculty:

Imo Akpan, MD
Mark Kozloff, MD

Section Administrator:

Jerry Schissler

*Research track faculty

*New FY19 faculty

Accomplishments, Highlights and Discoveries:

- **Michael Bishop, MD; Hedy Kindler, MD; Jyoti Patel, MD; and Blase Polite, MD** – Elected as Fellows of the American Society of Clinical Oncology
- **Richard Larson, MD** – Recipient of the Richard L. Schilsky Cancer and Leukemia Group B Achievement Award

DURING THE PAST YEAR, SECTION OF HEMATOLOGY & ONCOLOGY INVESTIGATORS:

- Identified variability in the stool microbiome as a major predictor of PD1 pathway directed immunotherapy efficacy (Matson, Gajewski, Alegre, Luke, et al., *Science*, 2018)
- Elucidated the interaction between clonal hematopoiesis and the microbiome to explain the association of leukemogenesis and cardiovascular diseases with this age related phenomenon (Meisel, Jabri, Godley, et al., *Nature*, 2018)
- Elucidated the role the glucocorticoid receptor as a potential cancer therapeutic target (Kach, Conzen, Szmulewitz, et al., *Molecular Cancer Therapeutics*, 2017), and (West, Conzen, Fleming, et al., *Clinical Cancer Research*, 2018)
- Discovered novel germ line leukemia predisposition syndromes (Drazer, Goldey, Daugherty, Churpek, et al., *Blood Advances*, 2018)
- Provided new insights to further the understanding and therapeutic targeting of genomic heterogeneity in gastro-esophageal cancer (Pectasides, Catenacci, et al., *Cancer Discovery*, 2017); (Maron, Catenacci, et al., *Cancer Discovery*, 2018) and (Wong, Bass, Catenacci, *Nature Medicine*, 2018)
- Advanced the use of clinical pharmacology and pharmacogenomics to optimize drug dosing and decrease toxicity (Szmulewitz, Ratain, Stadler, et al., *Journal of Clinical Oncology*, 2018).

SECTION OF Hospital Medicine

Under the leadership of David Meltzer, MD, PhD, the Section of Hospital Medicine is recognized for its innovative patient care, research and educational programs that are pushing the boundaries of clinical practice and training future generations of physicians in hospital medicine.

In FY18, five junior faculty joined the Section: Matthew Cerasale, MD; Thomas Chen, MD, PharmD; Elizabeth Murphy, MD; Andrew Schram, MD, MBA; and Anshu Verma, MD. Drs. Cerasale, Murphy and Schram have interests focused on quality improvement and operational efficiencies related to caring for hospitalized patients. Dr. Chen is interested in the health disparities in the Asian population, pharmacogenomics as well as medication reconciliation, cost effective prescribing, and quality improvements to decrease costs of care and improve health outcomes. Dr. Verma focuses her efforts in the Comprehensive Care Physician (CCP) program.

Section faculty care for some of the most medically complex patients admitted to the University of Chicago Medicine (UCM). During the past academic year, the Section continued to grow, employing over 40 hospitalists and a team of 6 advanced practice nurses and physician assistants who provide care to a growing volume of patients (110+ per day) at UCM. Under the leadership of Anton Marius Chivu, MD, Director of Clinical Operations, several major improvements were made to support excellence in clinical

care delivery and quality. These include establishing the first hospital medicine oncology service director role (D. Radovanovic, MD) and model for hospital medicine service leadership roles, and the deployment of co-managed services with hematology/oncology and orthopedic surgery. In addition, the Section developed advanced IT-supported strategies to optimize processes and outcomes, including an end-of-shift hand-off tool, and an innovative and award winning Virtual Multidisciplinary Rounds Navigator.

FY18 was also a major year for the Section's Medicare-funded Comprehensive Care Program (CCP), a program that seeks to improve care and lower costs through continuity of care. FY18 highlights for the CCP program include the recruitment of an APN to expand home care services and enroll Chicago patients in managed care contracts. Also noteworthy was successful completion of Phase I of the Robert Wood Johnson Foundation funded Comprehensive Care, Community and Culture Program (C4P) study including establishing a research center, hiring a community health worker, implementing systematic screening of unmet social needs and establishing a

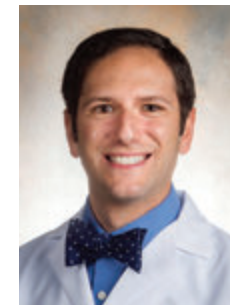
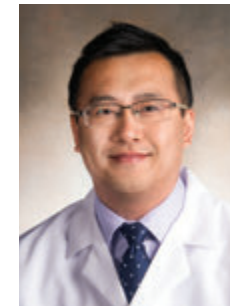


Dr. David Meltzer

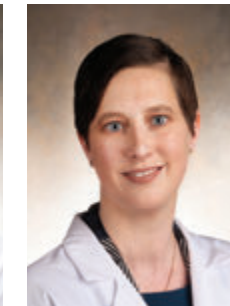
community based arts/culture program. New funding was also received which will extend the reach of the Community Health Worker Program and Artful Living Program, and support patient engagement and interviewing to better explore and address patients' medical and social needs. Nationally, the CCP program was recognized in the New York Times magazine (May, 2018) with a front page story entitled "Trying to Put a Value on the Doctor-Patient Relationship".

The Section's research portfolio consisted of \$5.6 million in extramural funding in FY18. In addition to the new CCP funding noted above, Micah Prochaska, MD was awarded a NIH K23 to study the effect of red blood cell transfusion on fatigue, activity and fatigability in hospitalized patients with anemia and Robert Gibbons, PhD was awarded supplemental funds from NIH related to his R01 project to develop computerized adaptive testing of suicidality in LGBT young adults. Dr. Meltzer successfully renewed the NIH T35 Short-Term Aging-related Research (STAR) program which has provided summer training in basic, clinical, and social science research for Pritzker medical students to inspire and prepare them to pursue careers in aging research. Dr. Meltzer was also awarded a new grant from the Laura and John Arnold Foundation to evaluate critical time intervention in a criminal justice setting.

Hospital Medicine faculty continue to be actively engaged in teaching and training of the next generation of physicians and physician scientists at the medical



school, residency and at the post graduate level. Leadership roles in the medical school include Associate Dean for Evaluation and Continuous Quality Improvement (Jeanne Farnan, MD), the Global Health Scholarship and Discovery track (Brian Callender, MD), Director and Assistant Program Director of the Internal Medicine Residency Program at Mercy Hospital (John Yoon, MD), director of the MD/PhD Program in the Social Sciences and chair of the Committee on Clinical and Translational Science (David Meltzer, MD, PhD). New educational initiatives in FY18 include an extramural teaching program on ethics directed by Dr. Yoon through the Hyde Park Institute. Additionally, the Hyde Park Institute and Chicago Translational Medicine Program (CMTP) award funded by the Biological Sciences Curricular Division and co-directed by Dr. Meltzer and Dr. Prochaska, provides a structured longitudinal mentoring program in clinical and translational medicine for University of Chicago undergraduates in the Biological Sciences working with faculty on biologically oriented research that relies on the Section's research infrastructure.



Dr. Thomas Chen
Dr. Matthew Cerasale,
Dr. Elizabeth Murphy
Dr. Andrew Schram
Dr. Anshu Verma

Dr. Vokes with
Jeanne Farnan, MD

Professors:
David Meltzer, MD, PhD (Chief)
Robert Gibbons, PhD

Associate Professors:
Jeanne Farnan, MD, MHPE

Assistant Professors:
Brian Callender, MD
Matthew Cerasale, MD
Ishanu Chattopadhyay, PhD
Thomas Chen, MD
Anton Chivu, MD
Vincent DiMaggio, MD*
Cheng-Kai Kao, MD
V. Ram Krishnamoorthi, MD
Shannon Martin, MD
Elizabeth Murphy, MD
Gregory Ruhnke, MD, MS, MPH
Andrew Schram, MD
Joyce Tang, MD
Anshu Verma, MD
John Yoon, MD

Instructor:
Micah Prochaska, MD

Clinical Associates and Scholars:

Hatem Al Kassem, MD
Daniel Ash, MD*
Rizma Bajwa, MD
Lihua Bao, MD*
Nicole Bendin, MD
Grace Berry, MD
Christina Boutsicaris, MD
Bryan Campbell, MD
Kwang Jin Choi, MD
Tatvam Choksi, MD
Dana Edelson, MD
Lizhu Gao, MD
Sarah Haroon, MD
David Hwang, MD*
Christine Jun, MD
Frederick Jung, MD*
Navneet Kaur, MD
Anne Kelly, MD
Ehtasham Khattak, MD
Stadjana Mitric, MD

Tokhanh Nguyen, MD
Frances Puello, MD*
Dragana Radovanovic, MD
Alexander Reisner, MD
Edwin Rosas, MD
Audrey Tanksley, MD
Eisha Wali, MD*
Chang Yang, MD
Madhu Yarlagadda, MD

Section Administrator:
Rebecca Schedin, MA

*New FY19 faculty

Accomplishments, Highlights and Discoveries:

- **Anton Marius Chivu, MD** – Appointed to Society of Hospital Medicine Practice Management Committee
- **Jeanne Farnan, MD** – Recipient of the Department of Medicine 2018 Pre-clinical Teacher of the Year Award
- **Elizabeth Murphy, MD** – Appointed to Society of Hospital Medicine Academic Hospitalist Committee
- **Shannon Martin, MD** – Inducted into Academy of Distinguished Medical Educators and selected as American Board of Medical Specialties Visiting Scholar for 2018-2019
- **Cheng-Kai Kao, MD** – Named as UCM's Associate Chief Medical Information Officer
- **Joyce Tang, MD** – Recipient of the Biological Sciences Division 2018 Distinguished Clinician (Junior) Award

DURING THE PAST YEAR, SECTION OF HOSPITAL MEDICINE INVESTIGATORS:

- Determined that personal exposure to role models in medical school is an important predictor of residency training in that role model's specialty (Yoon, et al., *Journal of Graduate Medical Education*, 2018)
- Described a model of attending remote EHR use for resident supervision, and quantified the frequency and magnitude of use (Martin, Farnan, Meltzer, et al., *Journal of Graduate Medical Education*, 2017)
- Showed an association between anemia and fatigue in hospitalized patients (Prochaska, Meltzer, et al., *Journal of Hospital Medicine*, 2017)
- Found no significant association between groundwater lithium exposure and the risk of bipolar disorder or dementia in the United States (Parker, Gibbons, et al., *JAMA Psychiatry*, 2018)

Infectious Diseases and Global Health

Under the direction of David Pitrak, MD the Section of Infectious Diseases and Global Health has seen continued growth and expansion of clinical activities, clinical trials, research, educational activities, and service to the institution in FY18. The Section's efforts in public health, particularly HIV care and prevention, extend out into communities on both the south and west sides of Chicago and across the state of Illinois to combat HIV, HCV, and drug addiction, and globally in Greece and China.

In FY18 Stephen Schrantz, MD, assistant professor of medicine and pediatrics, joined the Section. Dr. Schrantz's work is focused on pediatric to adult transition of care for children with congenital or childhood acquisition of HIV infection. He is also working with colleagues in the Department of Pediatrics to deliver post-partum care to women with HIV and their exposed children.

The Section continues to provide outstanding consultative services 24/7 to ensure optimal and timely management of serious infectious diseases and actively serves the oncology and transplant programs by running an immunocompromised host service, 7 days a week. In FY18, the Section enhanced its Outpatient Antibiotic Therapy Program (Jennifer Pisano, MD - Medical Director), a joint effort between the Antimicrobial Stewardship Program, Pharmacy and the Section, with the assistance of Paul Djurovich, PharmD, who is also a key provider for the Section's Compre-

hensive HIV Care Program. In quality initiatives, the UCM has continued to meet all its goals with respect to hand hygiene, central line associated bloodstream infections, and catheter associated UTIs, and continues to combat *C. difficile* infection in the hospital. These accomplishments by the Infection Control Program (Emily Landon, MD - Medical Director) contribute significantly to the UCM's perennial A ratings from the Leapfrog Group.

Within the Section, the Chicago Center for HIV Elimination (John Schneider, MD, MPH and David Pitrak, MD, Co-Directors) provides care for HIV-infected patients, as well as screening, prevention education treatment for pediatric HIV patients who are transitioning to adult care, and post-partum care for HIV-infected women and their exposed children. With uninterrupted funding from the Chicago Department of Public Health (CDPH) since 2011, Dr. Pitrak continues to focus his efforts on expanded HIV testing and linkage to care (X-TLC) for dispro-

portionately affected populations in healthcare settings at UCM and at 12 other sites on the south and west sides of Chicago. The program has resulted in diagnosis of patients at an earlier stage of disease and also reduced early AIDS-related deaths within 1 year of diagnosis. HIV testing also continued to expand at UCM in FY18 under the direction of Mai Pho, MD, MPH. Dr. Schneider continued to make progress toward elimination of new HIV transmissions on the south side of Chicago through his cutting edge HIV prevention programs at the Village and at the Howard Brown Health Center 55th Street Clinic.

In FY18, the Section's research portfolio continued to expand as well. New grants this year included a NIH R01 awarded to Dr. Schneider to guide and transform the rapidly evolving public health implementation of molecular HIV surveillance based prevention interventions as a critical step towards HIV elimination. Under the direction of Dr. Schneider, and with co-directorship by Dr. Pitrak and participation by Jessica Ridgway, MD, the Section maintained its involvement in the Third Coast Center for AIDS Research (CFAR) partnership with Northwestern University, the AIDS Foundation of Chicago, the CDPH, the Alliance of Chicago Community Health Systems, and the Center on Halsted, to reduce the very high rate of new HIV infections among young minority MSM in Chicago. Other research highlights include extramural funding for Dr. Ridgway from Gilead Sciences to develop rapid response team and algorithmic HIV post-test counseling in high-volume settings, and funding from the CDPH to utilize informatics to identify patients with HIV who are out of care. Dr. Ridgway also received a CFAR administrative supplement award to examine the barriers to PrEP



Dr. David Pitrak



Section of Infectious Diseases and Global Health

(pre-exposure prophylaxis) against HIV infection among African American Women in Chicago. Dr. Pho continued her work on optimizing patient-oriented outcomes for chronic hepatitis C as part of her NIH funded R00 award. She also received a CFAR administrative supplement award for Prelink (pre-release linkage) to HCV, HIV, and addiction services for inmates prior to release from jail, and a NIH UG3 program project that aims to ending transmission of HIV, HCV, and STDs and overdose in rural communities of people who inject drugs (ETHIC). In clinical research, Kathleen Mullane, DO continued to conduct a number of clinical trials of new antimicrobial agents, with many of her studies benefiting the immunocompromised patients in the leukemia, stem cell transplant, and solid organ transplant programs.

In the educational arena, the Infectious Diseases and Global Health Fellowship Program continues to attract outstanding fellows, the majority from the Department's internal medicine residency program. The Wuhan University Medical Education Reform (WUMER) Project, (Renslow Sherer, MD - Director), now in its ninth year, continues to lead faculty development, undergraduate curriculum improvement, residency training at Wuhan University and has been greatly received by the China Higher Education Association. Jonathan Lio, MD has joined the project and is assisting Dr. Sherer in program implementation. Dr. Lio has been accepted into the MERITS program to evaluate crowdsourcing in residency education in Wuhan. Dr. Pisano completed the MERITS fellowship and an educational program that developed an Antimicrobial Stewardship Educational Toolkit aimed at improving trainee education on the topic of appropriate antimicrobial usage.

Professors:

David Pitrak, MD (Chief)	Jonathan Lio, MD
Kathleen Mullane, DO, Pharm D	Moira McNulty, MD*
Kenneth Pursell, MD	Mai Pho, MD, MPH
Renslow Sherer, MD	Jennifer Pisano, MD
Stephen Weber, MD, MS	Jessica Ridgway, MD
	Stephen Schrantz, MD, MPP

Associate Professors:

Jean-Luc Benoit, MD	Section Administrator:
Titus Daniels, MD, MPH	James Jung
John Schneider, MD, MPH	

+New FY19 faculty

Assistant Professors:

Andiruddha Hazra, MD*
Emily Landon, MD



Dr. Stephen Schrantz

Accomplishments, Highlights and Discoveries:

- **Kathleen Mullane, DO** – Elected as a Fellow of the American Society of Transplantation
- **Jessica Ridgway, MD** – Co-chaired the 2017 Annual Third Coast CFAR Symposium entitled “Bridging the Disciplines to Understand HIV Transmission” held at Northwestern University in October 2017
- **Moira McNulty, MD** – Recipient of a Third Coast CFAR Pilot Award for her project “Implementing the Next Generation of HIV Testing Strategies”
- **John Schneider, MD, MPH** – Published his 100th article in the field of HIV prevention (Rusie, Schneider, et al., *Clinical Infectious Diseases*, 2018)

DURING THE PAST YEAR, SECTION OF INFECTIOUS DISEASES AND GLOBAL HEALTH INVESTIGATORS:

- Participated in two high profile clinical research studies that provided insights into new therapies for stem cell transplant recipients, including use of an inactivated varicella vaccine (Winston, Mullane, et al., *Lancet*, 2018) and the efficacy of letermovir for Cytomegalovirus prophylaxis (Marty, Ljungman, Maertens, Dadwal, Duarte, Haider, Ullmann, Mullane, et al., *New England Journal of Medicine*, 2017)
- Developed and implemented a gold standard for entity resolution within sexually transmitted infection networks (Schneider, et al., *Scientific Reports*, 2018)
- Developed and implemented an electronic risk score to identify emergency department patients who are potential candidates for preexposure prophylaxis (PrEP) care (Ridgway, Schneider, et al., *AIDS Patient Care STDS*, 2018)
- Found that severe sepsis outcomes depend on the patient's health before infection and the degree of organ dysfunction after infection (Greenberg, Kress, Pitrak et al., *American Journal of Critical Care*, 2018)

SECTION OF Nephrology

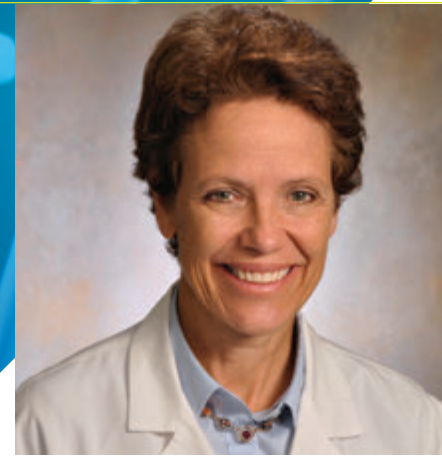
The Section of Nephrology continues its mission of developing innovative programs for the treatment of kidney diseases. Under the direction of Arlene Chapman, MD, FY18 was a productive and fruitful year for the Section with many accomplishments including the addition of a new faculty member, the development of the faculty research seminar and the first annual Renal Research Retreat on chronic kidney disease. Also noteworthy were the opening of the Section's 5th outpatient dialysis unit and the successful renewal of the NIH program project grant focused on kidney stone formation.

In July 2017 Pratik Shah, MD, assistant professor of medicine, joined the Section. Dr. Shah's work is focused on understanding risk factors for BK viremia in kidney transplant recipients with a particular emphasis on HLA and BK viremia. He is also interested in studying the role of gut microbiota in infectious and immunological complications after kidney transplantation.

The Section's joint venture with DaVita resulted in the opening of a 5th outpatient dialysis unit, Park Manor, under the direction of Rita McGill, MD. A 6th outpatient dialysis unit, Brighton Park, also opened July 2018. The four other University of Chicago-led DaVita-owned outpatient dialysis units continue to deliver excellent patient care. In FY18, the Stony Island Dialysis Unit was awarded the "DaVita Core Value Award of Team" by the DaVita Physician Council.

The Renal Ambulatory Care Clinic (Anna Zisman, MD - Director) has continued to build a Comprehensive Kidney Care program, adding nutritional services through Melanie Betz, RD, and social work support through Akilah King for the complex patient population. Finally with the FDA's approval of Tolvaptan (@Jynarque) for the treatment of autosomal dominant polycystic kidney disease patients at high risk for progression to end stage renal disease, the UCM Polycystic Kidney Disease Center of Excellence is now treating high risk patients with this drug for this condition.

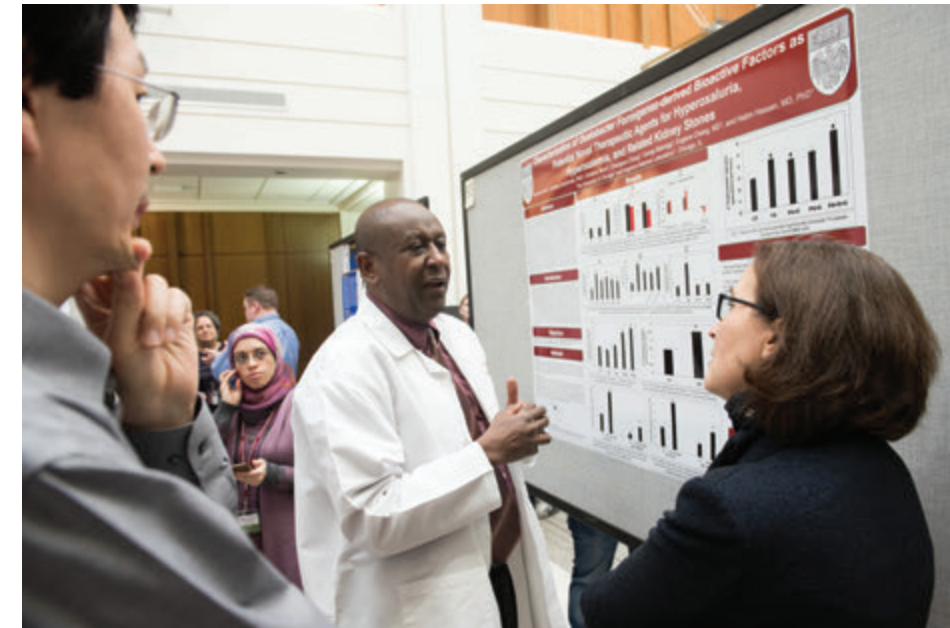
The Section of Nephrology is proud of its diverse bench, translational and patient oriented investigations in polycystic kidney disease, acute kidney injury, epithelial cell transport, growth, and gene expression, and the pathophysiology of kidney stone formation. Noteworthy in FY18



Dr. Arlene Chapman

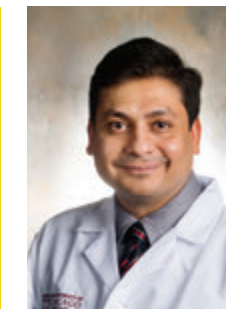
was the successful renewal of the NIH P01 grant "Pathogenesis of Calcium Nephrolithiasis" (Elaine Worcester, MD - PI) for years 16-20. With funding from the University of Chicago Innovation Fund and the New Venture Challenge, Hatim Hassan, MD, PhD co-founded a startup company "Oxalo Therapeutics" to investigate the therapeutic potential of oxalobacter formigenes-derived factors for hyperoxaluria, hyperoxalemia, and related kidney stones. Dr. Chapman continued her work, in collaboration with investigators at University of California-Davis, relating to the use of metabolomics for kidney diseases. Jay Koyner, MD, will begin his work utilizing EMR-based risk predictors designed for early identification of hospitalized patients likely to develop acute kidney injury.

The Nephrology Fellowship Program (Anna Zisman, MD - Program Director, Ben Ko, MD - Associate Program Director) developed several new initiatives. In FY18, a new conference, the "Director's Corner", was initiated where the Section and program directors work with the clinical fellows on new case presentations. A monthly multidisciplinary pathology conference is now a part of the Renal Grand Rounds curriculum in conjunction with the Department of Pathology. Under the direction of Dr. Ko, a Second Year Tracks Program provides fellows the opportunity to become subject matter experts in four subspecialized areas of nephrology (Stones and Bones, Genes and Beans, Vascular Access and Home Dialysis). This program resulted in a total of 13 abstracts presented at various meetings, including the American Society of Nephrology and the National Kidney Foundation's clinical meetings, as well as the Department of Medicine's Research



Dr. Hatim Hassan at 2018 Department of Medicine Research Day

Professors:	Assistant Professors:
Arlene Chapman, MD (Chief)	Patrick Cunningham, MD
Fredric Coe, MD	Hatim Hassan, MD, Ph.D.
Michelle Josephson, MD	Benjamin Ko, MD
Elaine Worcester, MD	Pratik Shah, MD
	Anna Zisman, MD
Associate Professors:	Clinical Associate:
Mary Hammes, DO	John Asplin, MD
Orly Kohn, MD	
Jay Koyner, MD	
Rita McGill, MD	Section Administrator:
Tipu Puri, MD, PhD	Matthew Lagen
Bharathi Reddy, MD	
Nicole Stankus, MD	



Dr. Pratik Shah

Day, with fellows winning the 2018 National Kidney Foundation "Controversies in Nephrology" debate under the mentorship of Orly Kohn, MD. Dr. Kohn, in conjunction with Paul Chang, MD (Department of Radiology), continued to train clinical nephrology fellows on both transplant and native kidney biopsy through didactic sessions and specialized training within the simulation center. Finally, Dr. Ko's TREKS (Tutored Research and Education for Kidney Scholars) program in conjunction with the American Society of Nephrology received funding for a second year. The TREKS program is one of only two national programs which hosts medical students from all over North America interested in nephrology for one week of intensive study to foster careers as future nephrologists.

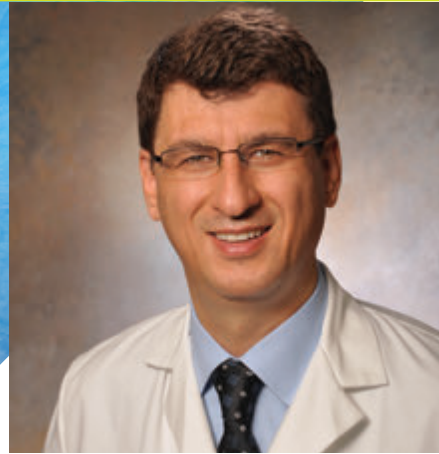
DURING THE PAST YEAR, SECTION OF NEPHROLOGY INVESTIGATORS:

- Identified the urine pH difference between normal men and women, demonstrating a link to GI alkali transport (Worcester, Coe, Bergsland, *American Journal of Renal Physiology*, 2018)
- Reported a slower decline in the estimated glomerular filtration rate (GFR) with the use of tolvaptan than with placebo in patients with autosomal dominant polycystic kidney disease (Torres, Chapman, et al., *New England Journal of Medicine*, 2017)
- Found that reduced active intestinal oxalate secretion contributes to the pathogenesis of obesity-associated hyperoxaluria suggesting proinflammatory cytokines

Accomplishments, Highlights and Discoveries:

- Hatim Hassan, MD, PhD** – Recipient of the Best Faculty Abstract Award (Basic Research) at the 2018 Department of Medicine Janet D. Rowley Research Day
- Michelle Josephson, MD** – Named as a Bucksbaum Institute for Clinical Excellence Senior Faculty Scholar and awarded a 2018 Bucksbaum Institute Pilot Grant for her study entitled "Patient decision making regarding kidney transplant options: a needs assessment"
- Benjamin Ko, MD** – Elected as a Fellow in the Academy of Distinguished Medical Educator and also selected by the Pritzker School of Medicine as the recipient of the 2018 LDH Wood Preclinical Teaching Award
- Nicole Stankus, MD** – Recipient of the 2018 Department of Medicine's Clinical Productivity Award for Procedure Activity
- Bharathi Reddy, MD** – Re-elected to the Medical Review Board of the ESRD Network 10 for a second 3 year term, and recipient of the 2018 Department of Medicine's Overall Clinical Activity Award
- Anna Zisman, MD** – Elected to the Research on Calculus Kinetics (ROCK) Society

Pulmonary/ Critical Care Medicine



Dr. Gökhan Mutlu

Under the leadership of Gökhan Mutlu, MD, the Section of Pulmonary and Critical Care Medicine continues to be recognized nationally for excellence in clinical medicine, impactful research and innovative educational programs. In FY18, two new faculty joined the Section: Bhakti Patel, MD, assistant professor, is a physician scientist who conducts critical care outcomes research including mechanisms by which critical illness causes neuromuscular weakness. Ayodeji Adegunsoye, MD, instructor is a physician scientist whose research focuses on the interstitial lung diseases.

Among the clinical programs within the Section, under the direction of Mary Strek, MD, the Interstitial Lung Disease (ILD) program has become a highly collaborative multidisciplinary program delivering outstanding clinical care to patients nationwide and internationally. In addition, our team was one of the 10 finalists to compete in the IPF Catalyst Challenge. Catherine Bonham, MD has established a sarcoidosis clinic, which is recognized by the Foundation for Sarcoidosis Research and World Association for Sarcoidosis and other Granulomatous Disorders. Laura Frye, MD has founded the first benign airway disease program in the Chicago area. Under the direction of Remzi Bag, MD, the Pulmonary Hypertension Program has received the 3-year extension on its designation of Center of Comprehensive Care from the Pulmonary Hypertension Association. Under the direction of Pamela J. McShane, MD, the bronchiectasis program received the Adult Primary Ciliary Dyskinesia Center of Excellence

from the Primary Ciliary Dyskinesia Foundation. Kyle Hogarth, MD, the director of our bronchoscopy program led the efforts to make UCMC the first center in Midwest to perform robotic bronchoscopy. The Section continues to maintain a successful research program and continued to have a successful year securing extramural NIH support. Yun Fang, PhD received two R01 awards to study the role of miRNA92A/PPAP2B signaling in endothelial cell function and nanomaterial-based endothelial cells specific delivery of miRNA inhibitor to treat atherosclerosis. Catherine Bonham, MD received a K23 award to investigate the role of T cells in idiopathic pulmonary fibrosis. Steve White, MD received an R34 award to study whether macrolides may mediate their beneficial effects in asthma via reversal of dysbiotic airway microbiota and a UG1 as part of Chicagoland Metropolitan Asthma Consortium. Gökhan M. Mutlu, MD renewed his R01 to continue to study the mechanisms by which

particulate matter air pollution causes cardiovascular pulmonary disease. Ayodeji Adegunsoye, MD was awarded a Pulmonary Fibrosis Foundation grant to study the impact of race on genetic predisposition to honeycombing in pulmonary fibrosis. Robert B. Hamanaka, PhD received an American Thoracic Society Foundation award and the Respiratory Health Association award to study the role of fibroblast metabolism in pulmonary fibrosis.

On the educational front, the Section's faculty continue to distinguish themselves in all domains of teaching and training. Jason Poston, MD was the recipient of the Favorite Faculty Award from the Pritzker School of Medicine graduating students for the sixth time. The Section continues to recruit outstanding fellows into our three fellowship programs: pulmonary and critical care medicine, sleep medicine and interventional pulmonary (IP). The Section successfully submitted AABIP accreditation for their IP fellowship program.



Dr. Ayodeji Adegunsoye



Dr. Bhakti Patel



Dr. Fang and Dr. Vokes

Accomplishments, Highlights and Discoveries:

- **Ayodeji Adegunsoye, MD** – Received the I.M. Rosenzweig Junior Investigator Award from Pulmonary Fibrosis Foundation
- **Yun Fang, PhD** – Recipient of the Department of Medicine Leif B. Sorensen Faculty Research Award
- **Robert Guzy, MD, PhD** – Recipient of the ASCI Young Physician-Scientist Award
- **Kyle Hogarth, MD** – Founder and president of the Society for Advanced Bronchoscopy
- **John P. Kress, MD** – Named as Chair, American Thoracic Society Critical Care Assembly
- **Babak Mokhlesi, MD** – Appointed as President of Society of Anesthesia and Sleep Medicine
- **Septimiu Murgu, MD** – Recipient of the CHEST Distinguished Educator Award, and named as secretary treasurer (incoming vice president) of the American Association for Bronchoscopy and Interventional Pulmonology
- **Edward Naureckas, MD** – Appointed as the President of Medical Staff, UCM; and served as senior author on CF Foundation Guidelines paper (Naureckas, *Annals of the American Thoracic Society*, 2018)
- **Jason Poston, MD** – Named as Chair, Preclinical Curriculum, Pritzker School of Medicine and Senior Editor for American Thoracic Society Review for Critical Care Boards, First Edition
- **Mary Strek, MD** – Recipient of CHEST Distinguished Educator Award
- **Esra Tasali, MD** – Appointed as a standing member of NIH CHSB Study Section
- **Steven White, MD** – Appointed as the Vice Chair for Promotions and Appointments for the Department of Medicine, and a member of the American Thoracic Society Publications Policy Committee

DURING THE PAST YEAR, SECTION OF PULMONARY/ CRITICAL CARE INVESTIGATORS:

- Discovered geographic variation in the management of US heart transplant candidates (Parker, Churpek, et al., *Journal of the American College of Cardiology*, 2016)
- Wrote a review article on management of persistent thoracic airleaks (Dugan, Murgu, Hogarth, *Chest*, 2017)
- Published a landmark study on African-American Race and Mortality in Interstitial Lung Disease (Adegunsoye, Churpek, Strek, *European Respiratory Journal*, 2018)
- Discovered novel ILD phenotypes that improve classification and prognostication in patients with pulmonary fibrosis (Adegunsoye, Strek, Churpek, *Chest*, 2018)
- Discovered how blood flow changes endothelial cell metabolism to drive endothelial dysfunction (Wu, Hamanaka, Fang, Mutlu, *Elife*, 2017)
- Discovered the role of PHGDH in pulmonary fibrosis (Hamanaka, Guzy, Wu, Dulin, Mutlu, *American Journal of Respiratory Cell and Molecular Biology*, 2018)
- Published one-year outcomes in patients receiving helmet ventilation for ARDS (Patel, Wolfe, Hall, Kress, *Critical Care Medicine*, 2018)
- Was the senior author on the state of the art guidelines on liberation from mechanical mechanical ventilation (Kress, *Chest*, 2017)
- Demonstrated the role of educational video on CPAP compliance (Mokhlesi, *Thorax*, 2017)
- Demonstrated the role of FGF2 in pulmonary fibrosis. (Dulin, Guzy, *Journal of Pathology*, 2018)
- Discovered the correlation between T cell responses and outcomes in S aureus bacteremia. (Hrusch, Hall, Kress, Sperling, Verhoef, *Critical Care*, 2018)
- Demonstrated changes in airway microbiome in atopic asthma (White, *Microbiome*, 2018)

Professors:

Gökhan M. Mutlu, MD (Chief)	Yun Fang, PhD
Edward Garrity, Jr., MD	Laura Frye, MD
Jesse Hall, MD**	Robert D. Guzy, MD, PhD
John P. Kress, MD	Renea Jablonski, MD*
Alan Leff, MD**	Robert B. Hamanaka, PhD*
Babak Mokhlesi, MD	Pamela J. McShane, MD
Edward Naureckas, MD	Bhakti Patel, MD
Julian Solway, MD	Philip Verhoef, MD, PhD
Mary Strek, MD	Krysta Wolfe, MD*
Steven White, MD	

Instructors:

Associate Professors:	Ayodeji Adegunsoye, MD
Remzi Bag, MD	Cara Hrusch, PhD
Bohao Chen, PhD*	Nathan Schoettler, MD, PhD*
Nickolai Dulin, PhD	David Wu, MD, PhD*

Kyle Hogarth, MD
John McConville, MD
Septimiu Murgu, MD
Jason Poston, MD
Anne Sperling, PhD
Esra Tasali, MD

Clinical Associate:

Rekha Vij, MD

Section Administrator:

Elineda Boyd

Assistant Professors:

Matthew Churpek, MD, PhD	*Research faculty
Jessica Cooksey, MD	*New FY 19 Faculty
	**Emeritus

SECTION OF Rheumatology



Dr. Marcus Clark

Under the leadership of Marcus Clark, MD, the Section continued its tradition of clinical excellence, innovative research and outstanding clinical training focused on understanding autoimmunity with the goal of improving the care of those afflicted with diseases such as lupus, rheumatoid arthritis, vasculitis and polymyositis. In the past year, Section faculty contributed to major advancements in the field of immunology that have the potential to translate into cutting edge treatments for those suffering from autoimmune and infectious diseases.

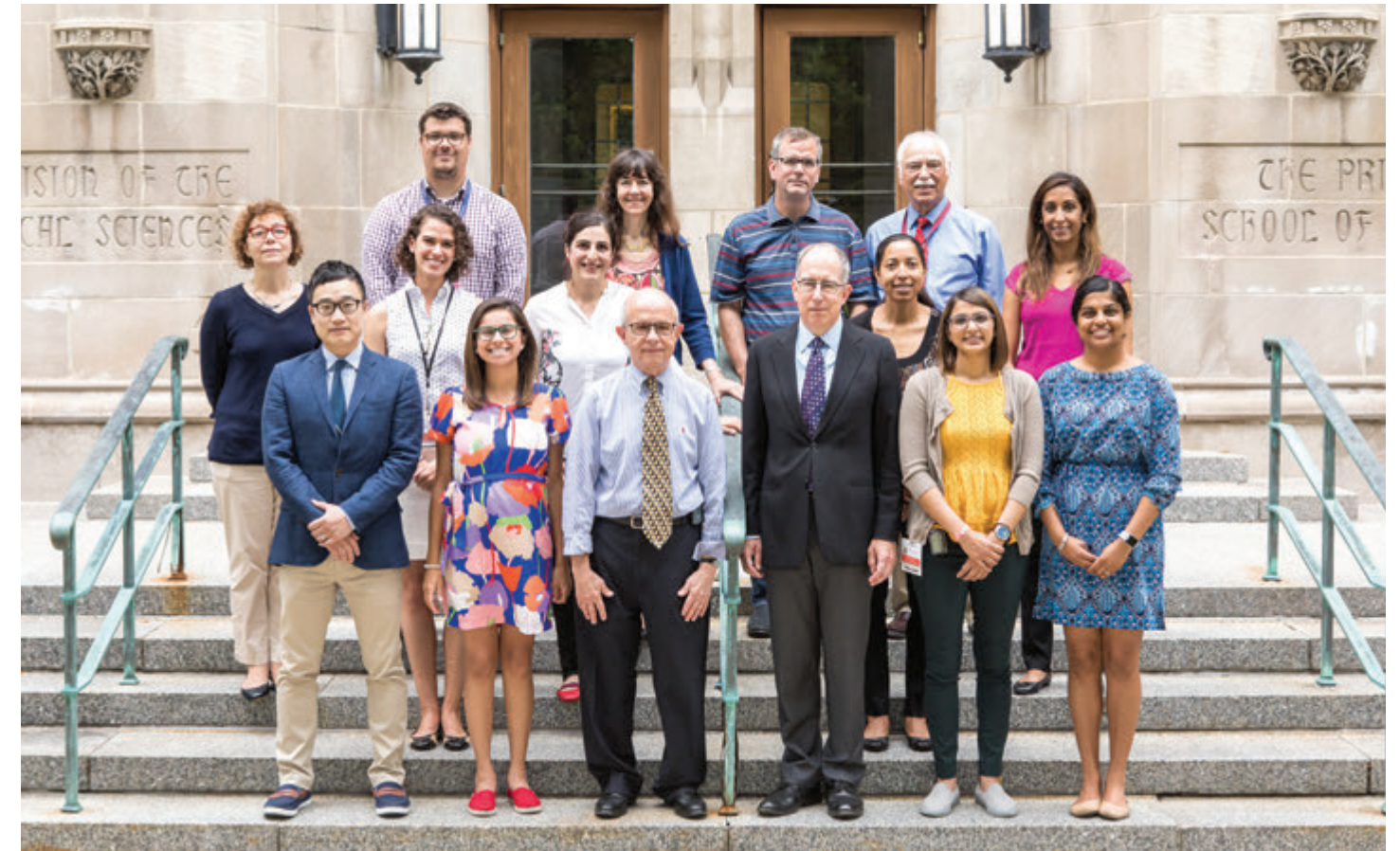
The Section maintains outstanding disease-focused clinical programs that drive its reputation for excellence in the treatment of rheumatic diseases. Recent programs that continue to grow and gain prominence are the Vasculitis Center (Anisha Dua, MD - Director) which launched last year and the Lupus Center under the co-directorship of Drs. Kichul Ko and Kimberly Trotter. New to the Lupus Center is a lupus nephritis longitudinal study cohort supported by the Knapp Center for Lupus and Immunology Research. This cohort will be critical for identifying clinical and immunological features of those patients at highest risk for progressive renal damage. Through the efforts of Drs. James Curran and Reem Jan, the Inflammatory Arthritis Clinic has grown and has gained prominence in the community and now includes joint ultrasound.

With research funding of approximately \$8.0M, the Section's robust investigative programs focus on

both innate and adaptive immunity. While the Section is committed to autoimmunity, the research in immunology has evolved to include innovative studies relevant to influenza, the microbiome and cancer. Indeed, by focusing on fundamental immunological mechanisms, the Section's work provides insights into the complex interplay between the immune system and disease. This year, Marisa Alegre, MD, PhD, led a successful effort to renew a NIH P01 grant to study the role of infection in the stability of transplantation tolerance. Fotini Gounari, PhD was awarded a grant from the American Society of Hematology to understand how activation of the developmental signaling pathway, beta-catenin, can lead to genomic instability and cancer. Through new grants and renewals, the Section has been able to maintain a robust grant portfolio enabling them to build impactful research programs in multiple areas. The work by the research group has been featured in high impact journals such as *Cell*, *NEJM*, *Science*, *Nature Immunol-*

ogy, *Immunity*, *Journal of Clinical Investigation*, *Science Immunology* and *Science Translational Medicine*.

On the educational front, the Section is very active in multiple training and teaching venues. Within the Rheumatology Fellowship Program, the Section continues to recruit top candidates to the program from record numbers of applications. The fellowship program was one of five chosen nationally to lead an initiative to have fellows educate community providers on the early recognition and management of lupus. Finally, the Section is home to the Medical Scientist Training Program (MSTP) which celebrated its 50th anniversary with a symposia and retreat featuring illustrious alumni including Drs. Christopher Walsh (Harvard), Matthew Vander Heiden (MIT), Mark Krasnow (Stanford) and Mark Anderson (UCSF). The MSTP NIH T32 was also successfully renewed making it one of the longest, continually NIH-funded programs in the United States.



Section of Rheumatology

Professors:

Marcus Clark, MD (Chief)
 Maria-Luisa Alegre, MD, PhD
 Michael Becker, MD**
 James Curran, MD
 Leif Sorensen, MD, PhD**
 Patrick Wilson, PhD

Associate Professors:

Fotini Gounari, PhD
 Malay Mandal, PhD*

Assistant Professors:

Anisha Dua, MD
 Reem Jan, MD
 Kichul Ko, MD
 Vladimir Liarski, MD
 Kimberly Trotter, MD

Clinical Associate:

Aimee Mayuga, MD

Section Administrator:

Ann Leu

**Emeritus

*Research faculty



Dr. Anisha Dua and Dr. Vokes

DURING THE PAST YEAR, SECTION OF RHEUMATOLOGY INVESTIGATORS:

- Demonstrated that antibodies to influenza neuraminidase are broadly protective in humans. This finding opens new avenues for the development of a universal influenza vaccine (Wilson and colleagues, *Cell*, 2018)
- Identified novel signaling mechanisms controlling antigen presentation in B cells (Clark and colleagues, *Journal of Experimental Medicine*, 2017)
- Defined cardiovascular risk in gout patients treated with febusostat or allopurinol (Becker, White and colleagues, *New England Journal of Medicine*, 2018)
- Revealed that the commensal microbiome is associated with the efficacy of anti-PD-1 therapy in melanoma patients (Alegre, Gajewski, and colleagues, *Science*, 2018)
- Demonstrated that IgA antibodies reactive to the microbiota are selected for polyreactivity (Wilson, Bendelac, and colleagues, *Science*, 2018)

Accomplishments, Highlights and Discoveries:

- **Marisa Alegre, MD, PhD** – Named as the 2018 Harvard Paul Russell Visiting Professor
- **Anisha Dua, MD** – Recipient of the 2018 Department of Medicine's Clinical Service Award

Internal Medicine Residents

2018 Chief Residents

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED
Amrish Deshmukh		Case Western Reserve University
Abdulrahman Dia		University of Illinois
Michelle Fletcher		University of Chicago
Erica MacKenzie		University of Chicago

2019 Chief Residents

Lauren Feld		Icahn School of Medicine at Mount Sinai
Sarah Gray		University of Michigan
Marie McKinnon		University of Colorado
David Tehrani		University of California, Irvine

Third Year Residents

Nina Arhin	III	Meharry Medical College
Rene Bermea, Jr	III	University of Chicago
Brittany Bindon	III	Loyola University
Keely Browning	III	Medical College of Wisconsin
Kirk Cahill	III	University of Chicago
Mike Cheng	III	Case Western Reserve University
Noura Choudhury	III	University of Chicago
Anthony de la Pena	III	University of Illinois
Sarah Feenstra	III	University of Chicago
Christopher Fernandes	III	University of Illinois
Felipe Fernandez del Castillo	III	University of Massachusetts
Christopher Frohne	III	University of Virginia
Amulya Gampa	III	University of Illinois
Raffi Hagopian	III	Ohio State University
Michael Hawking	III	University of Michigan
Jennifer Houpy	III	University of Chicago
Anupama Joseph	III	Ohio State University
Joshua Katz	III	Loyola University
Kendall Kling	III	Loyola University
Grace Koo	III	University of Maryland
Shawn Kothari	III	University of Pennsylvania
Ernesto Llano	III	University of Texas, Southwestern
Alexandru Marginean	III	Chicago Medical School
Daniel Meza	III	University of Illinois
Elizabeth Munroe	III	University of Chicago
Justin Porter	III	New York University
Elzbieta Stob	III	Creighton University
Julia Sun	III	Duke University

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED
Eric Swei	III	Ohio State University
Natalie Tapaskar	III	Case Western Reserve University
Adam Vohra	III	University of Chicago
Thomas Wagner	III	Medical College of Wisconsin

Second Year Residents

Murtaza Bharmal	II	University of Vermont
Kent Brummel	II	Northwestern University
Jennifer Cooperrider	II	Ohio State University
Bonnie Diep	II	University of Southern California
Elizabeth Donnelly	II	University of Chicago
Donald Goens	II	University of California, San Francisco
Gregory Ingolia	II	University of Colorado
Anthony Kanelidis	II	University of Miami
Shivani Khanna	II	Boston University
Neal Klauer	II	University of Minnesota
Brian Labadie	II	University of California, Irvine
Jonathan Lattell	II	Loyola University
Betty Li	II	University of Illinois
Austin Lin	II	University of Michigan
Maria Maldonado	II	Baylor College of Medicine
Michael Maranzano	II	Duke University
Steven Mazzone	II	Rush Medical College
Christopher Miller	II	University of Illinois
Rebeca Ortiz Worthington	II	University of Chicago
Charles Oshinsky	II	New York University
Raghavendra Paknikar	II	University of Michigan
Eleanor Reimer	II	University of Michigan
Hannah Roth	II	University of Chicago
Brooke Scheidemantle	II	Thomas Jefferson University
Anthony Serritella	II	Johns Hopkins University
Wenfei Wang	II	University of Toledo
Hannah Wey	II	Rutgers University
William Wilson	II	Indiana University
Thomas Yates	II	Wake Forest University

First Year Residents

Rasidat Adeduntan	I	University of Virginia
Gaurav Ajmani	I	University of Chicago
Spencer Carpenter-Carter	I	University of North Carolina
Ellen Daily	I	University of Chicago
Anup Das	I	University of Michigan
James Dolezal	I	University of Pittsburgh
Jonathan Dowd	I	Loyola University
Marie Dreyer	I	Medical College of Wisconsin
Nolan Faust	I	University of Chicago
Dariusz Hareza	I	Albert Einstein College of Medicine of Yeshiva University
Jacobi Hines	I	University of Virginia
Michael Jacobs	I	Thomas Jefferson University
So Lim Kim	I	Case Western Reserve University
Aristotle Leonhard	I	Medical College of Wisconsin
Ross McMillan	I	Johns Hopkins University
Tamari Miller	I	University of Chicago
Nupur Mistry	I	Saint Louis University
Amol Naik	I	University of Chicago

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED
Julia Nath	I	University of Chicago
Patrick Naureckas	I	University of Illinois
Shirlene Oduobi	I	University of Chicago
Kevin Prescott	I	University of Illinois
Corey Rearick	I	University of Pittsburgh
Ashely Smith-Nunez	I	University of Washington
Ragha Suresh	I	Rutgers University
Joseph Thomas	I	Indiana University
Dennis Jingzhou Wang	I	University of Virginia
Joshua Waytz	I	University of Chicago
Joseph Weber	I	Loyola University
Kathleen Wiest	I	University of Chicago
Maryam Zafer	I	Icahn School of Medicine at Mount Sinai

Preliminary

Kurt Alberson	I	University of Chicago
Rohan Katipally	I	Brown University
Katrina Kesterson	I	University of Tennessee
Saira Khanna	I	University of Wisconsin
Lukas Matern	I	University of Chicago
Maurenn Riegert	I	University of Wisconsin
Ruth Tangonan	I	University of Illinois

Physician Scientist Development Program

Ariel Halper-Stromberg	II	Cornell University
Benjamin McDonald	II	University of Chicago
Matthew Odenwald	II	University of Chicago
Athalia Pyzer	II	University of Birmingham
Obada Shamaa	II	Ohio State University
Joseph Goldenberg	I	University of Illinois
Jeremy Treger	I	University of Chicago
Lauren Young	I	New York University

Medicine-Pediatrics Program

Fourth Year Residents

Zainab Abdul-Rahim	IV	University of Massachusetts
Rebecca Chohlas-Wood	IV	University of Washington
Thomas Couri	IV	University of Chicago
Robert Sanchez	IV	University of Chicago

Third Year Residents

Erin Hickey	III	University of Colorado
Stephanie Kelly	III	McGill University
Jori Sheade	III	Rush Medical College
Daniel Teixeira da Silva	III	Boston University

Second Year Residents

Alanna Burnett	II	University of Illinois
Nathan Georgette	II	Harvard University
Sanjay Juman	II	Rutgers University
Bennett Waxse	II	University of Texas, Southwestern

First Year Residents

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED
Daniela Anderson	I	University of Utah
Omar Jamil	I	University of Illinois
Ira Kraft	I	University of Utah
Natalie Munger	I	University of Washington

Dermatology Residents

Third Year Residents

Stephanie Kazantsev	IV	University of Chicago
Kathleen Kelley	IV	Indiana University
Larry Napolitano	IV	Case Western Reserve University

Second Year Residents

Clifford Hsieh	III	University of Chicago
Emily Lund	III	Columbia University
Jared Wishik	III	University of Florida

First Year Residents

Julia Dai	II	University of Pennsylvania
Arjun Dayal	II	University of Chicago
Erin Dodd	II	University of Minnesota
Esther Kim	II	University of Central Florida

Emergency Medicine Residents

Third Year Residents

Zakaria Abdalnabi	III	Case Western Reserve University
Patrick Ardron-Hudson	III	Oregon Health & Science University
Maureen Canellas	III	University of Colorado
Mark Chottiner	III	University of Maryland
Dustin Harris	III	University of California, Los Angeles
Michelle Ho	III	University of Maryland
Andrew Hogan	III	University of Texas, Southwestern
Eric Keast	III	University of Michigan
Jason Kopec	III	University of Rochester
Hani Kuttub	III	Loyola University
Zayir Malik	III	Emory University
Abdullah Pratt	III	University of Chicago
Kevin Quirke	III	Loyola University
Charlotte Roy	III	Cornell University
Brian Strickland	III	University of Southern California
Garth Walker	III	University of Illinois at Chicago

Second Year Residents

Leslie Anderson	II	University of Rochester
Brian Bush	II	University of Pittsburgh
Adriana Coleska	II	University of Michigan
Emily DeDonato	II	Ohio State University
Annette Dekker	II	Northwestern University
Amelia Derstine	II	University of Michigan
Christopher Harris	II	University of Virginia
Matthew Heuton	II	Harvard University
Courtney Hutchins	II	Rush Medical College

Emergency Medicine Residents

Second Year Residents (Continued)

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED
Leigh Jackson	II	Meharry Medical College
Brendan McEvoy	II	University of Michigan
Thomas O'Brien	II	Rutgers University
Kristina Pfeiffer	II	New York University
Saaduddin Siddiqui	II	University of Chicago
Joseph Tarran	II	University of Chicago
Eric Wang	II	Georgetown University
William Weber	II	Northwestern University

First Year Residents

Dany Accilien	I	Florida International University
Yom Alemante	I	University of Southern California
Ben Arevalo	I	Harvard University
Danielle De Freitas	I	Meharry Medical College
Casey Distaso	I	Georgetown University
Jasmine Ginn	I	Howard University
Deirdre Goode	I	University of Virginia
Dexter Graves	I	Drexel University
Samantha Hay	I	Virginia Commonwealth University
Mike Hernandez	I	Columbia University
Michael McCartin	I	University of Chicago
Jonathan Oskvarek	I	University of Chicago
Daven Patel	I	University of Illinois at Chicago
Arthur Pope	I	Loyola University
Regina Royan	I	University of Michigan
Semhar Tesfai	I	Columbia University

Fellows: Cardiovascular Diseases

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED	RESIDENCY
Lane Benes	VI	University of Wisconsin	University of Chicago
Tharlan Cherian	VI	University of Chicago	Stanford University
Heddy Luise Holzhauser	VI	International Program	Albert Einstein College of Medicine

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED	RESIDENCY
Paul Larsen	VI	Tulane University	University of California
Andrew Putnam	VI	Loyola University	University of Michigan

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED	RESIDENCY
Joseph Venturini	VI	Loyola University	University of Chicago
Rajeev Anchan	V	University of Nebraska	University of Nebraska
Emeka Anyanwu	V	Case Western Reserve University	University of Chicago
Ilya Karagodin	V	Northwestern University	Medical College of Wisconsin
Isla McClelland	V	Georgetown University	Medstar Georgetown University
Andrew Dehler	V	Indiana University	Oregon Health and Science University
Dong Bo Yu	V	University of Texas, Southwestern	University of Chicago
Mark Belkin	IV	Rush Medical College	University of Chicago
Mark Dela Cruz	IV	University of California, San Francisco	University of California, San Francisco
Abdulahman Dia	IV	University of Illinois	University of Chicago
Michael Henry	IV	Loyola University	University of Michigan
Swati Rao	IV	University of Utah	Thomas Jefferson University

Interventional Cardiology

Rohan Kalathiya		University of Kentucky	Johns Hopkins University
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Clinical Cardiac Electrophysiology

Christopher Jones	VII	East Carolina University	Marshall University
Arun Kannan	VII	Kilpauk Medical College	Canton Medical Education Foundation
Zenith Jameria	VII	Indiana University	University of Cincinnati

Advanced Heart Failure

Imo Ebong	VII	University of Nigeria	Cleveland Clinic
Nikhil Narang	VII	University of Illinois	University of Chicago
Kalie Kebed	VII	University of Minnesota	Mayo Clinic
Nina Rashedi	VII	Chicago Medical School	Cleveland Clinic

Dermatology

Amer Almohssen	V	King Abdulaziz University (Saudi Arabia)	Rutgers University
Dena Elkeeb	V	Tripoli University (Libya)	University of Utah

Endocrinology, Diabetes and Metabolism (Adult)

Laura Dickens	VI	Emory University	University of Chicago
Isabel Casimiro	V	University of Washington	University of Chicago
Sonaina Imtiaz	V	Rawalpindi Medical College, Pakistan	North Shore Medical Center, Salem, MA
Sikarin Upala	V	Siriraj Hospital Faculty, of Medicine Thailand	Bassett Medical Center
Monika Darji	IV	Chicago Medical School	University of Louisville
Thaer Idrees	IV	University of Damascus Faculty of Medicine	Presence Saint Joseph Hospital

Endocrinology, Diabetes and Metabolism (Pediatrics)

Tara Rajiyah	V	Royal College of Surgeons, Ireland	Newark Beth Israel Medical Center, New Jersey
Harini Kolluri	V	Andhra Medical College, India	John H. Stroger Jr. Hospital
Mary McCauley	IV	University of Illinois	Lutheran General Hospital
Maria Salguero Bermonth	IV	Universidad de Antioquia Facultad de Medicina, Colombia	Harvard Medical School

Gastroenterology, Hepatology and Nutrition

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED	RESIDENCY
Jacob Ollech	VIII	Semmelweis University	Hadassah University Medical Center
Edward Villa	VII	Loyola University	Loyola University
Adjoa Anyane-Yebo	VII	University of Cincinnati	University of Illinois at Chicago
Amanda Israel	VI	University of British Columbia	University of Ottawa
Thomas Lu	VI	University of Cincinnati	University of Chicago
Bianca Chang	VI	Cornell University	Cedars-Sinai Medical Center
Matthew Stier	VI	Purdue University	University of Chicago
Yunwei Wang	VI	Shanxi Medical University, China	University of Nevada
Thomas Cotter	V	NUI Galway School of Medicine, Ireland	Mayo Clinic
Sujaata Dwadasi	V	Indiana University	Emory University
Nina Gupta	V	University of Chicago	University of Chicago
Matthew Berger	IV	St. George's University	Stony Brook University Hospital
Noa Cleveland	IV	University of Illinois	University of Chicago
Ye Eun Kwak	IV	Seoul National University College of Medicine	Yale University/Bridgeport Hospital
Charles Muller	IV	University of Chicago	University of Chicago
Parita Patel	IV	Case Western Reserve University	University of Chicago
Jennifer Wang	IV	University of Virginia	University of Virginia

Geriatrics and Palliative Medicine

Vania Leung (Geriatrics)	IV	University of Illinois	University of Illinois at Chicago
Allison Thoburn (Geriatrics)	IV	University of Illinois	University of Chicago
Katelyn R. Good (Palliative)	V	Virginia Commonwealth University	University of Chicago
Gina Piscitello (Palliative)	IV	University of Minnesota	University of Chicago
Saud A. Siddiqui (Palliative)	IV	Ziauddin Medical College	University of Illinois

Hematology/Oncology

Arpita Desai	VII	Kempegowda Institute of Medical Science	University of Buffalo
Anu Neerukona	VII	Kamneri Institute	State University of New York
Benjamin Derman	VI	Northwestern University	Rush University
Andrew Hantel	VI	Loyola University	University of Chicago
Michael Jelinek	VI	Rush Medical College	University of Chicago
Smita Joshi	VI	University of Chicago	University of Chicago
Joseph Wynne	VI	New York University	University of Chicago
Brian Heiss	V	University of Maryland	University of Pittsburgh
Michael Leukam	V	Loyola University	University of Chicago
Marquita Nelson	V	Emory University	Emory University
Ofaf Osman	V	Weill Cornell	Johns Hopkins University
Daniel Olson	V	Rush Medical College	Northwestern University
Sheila Padma Rajogopal	V	Columbia University	University of Pittsburgh
Jonathan Trujillo	V	University of Iowa	University of Chicago
Amy Wang	V	McGovern Medical	University of Chicago
Anand Patel	IV	University of Missouri	Northwestern University
Natalie Reizine	IV	Loyola University	University of Chicago

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED	RESIDENCY
Carolina Soto Chervin	IV	University of Illinois	University of Chicago (NorthShore)
Meghan Steiner	IV	University of South Carolina	Duke University
Garth Strohbehn	IV	Yale	University of Michigan
Sherin Rouhani	III	University of Virginia	University of Chicago

Hospital Medicine/Hospitalist Scholars

Pooja Gala	V	Weill Cornell	New York University
Ali Thaver	V	Aga Khan University	Johns Hopkins University
Michael Cui	IV	University of Chicago	University of Chicago
Vivian Lee	IV	Chicago Medical School	Case Western Reserve University

Infectious Diseases & Global Health

Margaret Newman	VI	University of Illinois at Chicago	University of Illinois at Chicago
Maggie Collison	IV	Michigan State University	Boston University
Gregory Olson	IV	University of Illinois at Peoria	Beth Israel Deaconess

Nephrology

Saurabh Chawla	V	Medical College of Thiruvananthapuram	John H. Stroger Jr. Hospital
Victoria Vo	V	University of Arizona	University of South Carolina
Sai Prasad Gadapa	IV	Kakatiya Medical College, India	St. Francis Medical Center
Samantha Gunning	IV	Georgetown University	University of Chicago
Ryann Hyder	IV	University of Missouri	University of Texas, Houston
Nevin Murthy	IV	Chicago Medical School	University of Louisville
Javeria Syed	IV	Aga Khan University	Dow Medical College

Pulmonary/Critical Care

Karen Dugan	VII	Ohio State University	University of Chicago
Heng Duong	VII	Case Western Reserve University	University of California, San Francisco
William Parker	VII	University of Chicago	University of Chicago
Juan Rojas	VII	University of Illinois at Chicago	University of Chicago
Sivasubramaniam (Siva) Bhavani	VI	University of Texas, Galveston	Baylor University
James Katsis	VI	St. George's University	Georgetown University
Lucas Kimmig	VI	University of Freiburg	University of Pennsylvania
Julie Lin	VI	University of Texas, Southwestern	University of Texas, Southwestern
Xuan (Susan) Han	V	University of Chicago	University of Chicago
Cathryn Lee	V	Emory University	University of Chicago
William Dwight Miller	V	University of Virginia	University of California, Los Angeles
Erica MacKenzie	V	University of Chicago	University of Chicago
Steven Pearson	IV	University of Illinois at Chicago	University of Chicago
Danielle Stahlbaum	IV	Case Western Reserve University	University of Chicago
Matthew Stutz	V	University of Chicago	University of California, Los Angeles

Sleep Medicine

NAME	PGY LEVEL	MEDICAL SCHOOL ATTENDED	RESIDENCY
Abigail Doyle	VII	Michigan State	Metro Health, WY
Julie Neborak	IV	University of Minnesota	University of Chicago
Syema Sheikh	VII	Chicago Medical School	University of Chicago

Interventional Pulmonology

Udit Chaddha	VII	Seth GS Medical College (India)	University of Louisiana
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Rheumatology

Pankti Reid	VI	Ohio State University	University of Cincinnati
Iazmin Ventura	VI	Universidade de Brasilia	Icahn School of Medicine
Veena Patel	VI	American University of Antigua College of Medicine	UTHealth McGovern Medical School
Josna Haritha	VI	University of Alabama	Virginia Commonwealth University
Emily Kitchin	IV	Indiana University	Medical College of Wisconsin
Patrick Onkka	IV	Indiana University	Rush University

Resident and Fellow Program Graduates FY18

Internal Medicine

NAME	POSITION	INSTITUTION
Maria Bacalao	Rheumatology Fellow	University of Texas, Southwestern
Mark Belkin	Cardiology Fellow	University of Chicago
Margaret Boyle	Dermatology Resident	University of Chicago
Kira Charney	Hospitalist	Lake Forest Hospital
Michael Cui	Medical Informatics Fellow	University of Chicago
Andre Davies	Hospitalist	Northwestern University
Abdulrahman Dia	Cardiology Fellow	University of Chicago
Amrish Deshmukh	Cardiology Fellow	University of Michigan
Michelle Fletcher	Hospitalist	Northwestern University
Greg Haman	Private Practice	Cermak Health Services of Cook County
Rebecca Harris	Chief Resident	MacNeal Hospital
Blake Jones	Gastroenterology Fellow	University of Colorado
Albert Lee	Hospitalist	Cleveland VAMC
Linda Lee	Chief Resident	MacNeal Hospital
Zachary Lonjers	Nocturnist	MacNeal Hospital
Erica MacKenzie	Pulmonary/Critical Care Fellow	University of Chicago

NAME	POSITION	INSTITUTION
Priya Mehta	Cardiology Fellow	Northwestern University
Jerry Nnanabu	Cardiology Fellow	University of Washington
Parita Patel	Gastroenterology Fellow	University of Chicago
Caitlyn Plonka	Hospitalist	St. Joseph Michigan
Steven Pearson	Pulmonary/Critical Care Fellow	University of Chicago
Gina Piscitello	Palliative Care Fellow	University of Chicago
Natalie Reizine	Hematology/Oncology Fellow	University of Chicago
Trisha Saha	Allergy & Immunology Fellow	Johns Hopkins University
Claire Shappell	Pulmonary/Critical Care Fellow	Brigham and Women's Hospital
Ethan Silverman	Palliative Care Fellow	University of Wisconsin
Danielle Stahlbaum	Pulmonary/Critical Care Fellow	University of Chicago
Allison Thoburn	Geriatrics Fellow	University of Chicago
Eisha Wali	Hospitalist	University of Chicago
Hannah Wenger	Rural Health Leadership Fellow	Massachusetts General Hospital
Jessica Gold	Genetics Fellows	University of Pennsylvania
Katie Good	Palliative Care Fellow	University of Chicago
Ellora Karmarkar	Epidemiology Intelligence Service Fellow	Center for Disease Control
Amy Wang	Hematology/Oncology Fellow	University of Chicago

Medicine – Pediatrics

Jessica Gold	Genetics Fellows	University of Pennsylvania
Katie Good	Palliative Care Fellow	University of Chicago
Ellora Karmarkar	Epidemiology Intelligence Service Fellow	Center for Disease Control
Amy Wang	Hematology/Oncology Fellow	University of Chicago

Dermatology

Laura Buford	Private Practice	High Plains Dermatology, Amarillo, TX
Jingyun(Juliana) Gao	Private Practice	Kaiser Permanente, Gaithersburg, MD
Ashley Jenkins	Private Practice	Central Missouri Dermatology, Columbia, MO
Rebecca Kaiser	Private Practice	Dermatology Associates, VA
Lohini Sundharkrishnan	Private Practice	Derick Dermatology, Elgin, IL

Emergency Medicine

Sina Akhavan	Staff Physician	Kaiser Permanente, Downey, CA
Dillon Barron	Fellow	CEP America & Presence St. Francis, Chicago, IL
Lauren Cooper	Sports Medicine Fellow	Stanford University
Michael Ernst	Attending Physician	Emergency Medicine Consultants, Dallas, TX
Steven Flynn	Attending Physician	Methodist Hospital, Gary, IN
Rachel Gilmer	Fellow	Memorial Medical Center ,Modesto, CA
Mobola Kukoyi	Attending Physician	Carle Foundation Hospital, Urbana, IL
Albert Leung	Staff Physician	Kaiser Permanente, San Francisco, CA
Andrew Marshall	Clinical Informatics Fellow	Beth-Israel Deaconess Medical Center

NAME	POSITION	INSTITUTION
Jacob Moore	Staff Physician	Rush University Medical Center
Natalie Neumann	Toxicology Fellow	Rocky Mountain Poison & Drug Center, Denver, CO
Archana Shah	Fellow	Mt. Sinai (Vituity), Chicago, IL
Brian Sprouse	Clinical Instructor	Rush University Medical Center
Shameeke Taylor	Global Health Fellow	Mt. Sinai St. Luke's, New York, NY
Joshua Wunder	Staff Physician	Advocate Sherman Hospital, Elgin, IL
Richard Zhang	Attending Physician	Mercy, St. Joseph & CE, Aurora & Joliet, IL

Cardiology

Bhavna Balaney	Cardiologist	JenCare Senior Medical Center
Rohan Kalathiya	Advanced Interventional Cardiology Fellow	University of Chicago
Kalie Kebed	Cardiac Imaging Fellow	University of Chicago
Luke Laffin	Assistant Professor	Cleveland Clinic
Nikhil Narang	Advanced Heart Failure & Transplant Cardiology Fellow	University of Chicago
Jeremy Stone	Assistant Professor	University of Nebraska Medical Center
Akhil Narang	Assistant Professor	Northwestern University
Neha Goyal	Cardiac Imaging Faculty	India
Jonathan Rosenberg	Interventional Cardiologist Faculty	Northshore University Health System
Taishi Hirai	CTO/CHIP Fellow	Mid America Heart Institute
Ben Chung	Clinical Associate	University of Chicago
Ann Nguyen	Research Fellow	University of Chicago

Endocrinology, Diabetes & Metabolism

Mizuho Mimoto	MSP Staff Physician	University of California, San Diego
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Pediatric Endocrinology, Diabetes & Metabolism

Michelle Lemelman	Assistant Professor	University of Chicago
Susan Tucker	Pediatric Endocrinologist	Wheaton, IL

Gastroenterology, Hepatology & Nutrition

Roni Weissshof	Staff Gastroenterologist	Rambam Medical Center
Steven Shamah	Advanced Endoscopy Faculty	Rabin Medical Center, Petah Tikva
Adam Mikolajczyk	Assistant Professor	University of Illinois at Chicago
Neha Nigam	Assistant Professor	Northwestern University
Anna Lipowska	Assistant Professor	University of Illinois at Chicago
Mark Anthony Sofia	Assistant Professor	Oregon Health & Science University
George Ou	Staff Gastroenterologist	St. Paul's Hospital/ University of British Columbia

Geriatrics and Palliative Medicine

Michael Huber (Palliative)	Clinical Assistant Professor	University of Illinois at Chicago
Emily Escue (Palliative)	Faculty	University of Minnesota

NAME	POSITION	INSTITUTION
Vanessa Alonso (Geriatrics)	Attending Physician	Stroger Hospital of Cook County
Adeela Cheema (Geriatrics)	Research Associate	University of Chicago
Chandni Patel (Geriatrics)	Health System Clinician	Northwestern University

Hematology /Oncology

Christine Bestvina	Assistant Professor	University of Chicago
Michael Drazer	Coggeshall Fellow	University of Chicago
James Godfrey	Coggeshall Fellow	University of Chicago
Abiola Ibraheem	Advanced Fellow	University of Chicago
Allison West	Clinical Cancer Geneticist at the Kellogg Cancer Center	Northshore
Kristen Whitaker	Assistant Professor	Fox Chase Cancer Center

Infectious Diseases and Global Health

Amutha Rajagopal	Preventative Medicine Residency	University of California,San Diego
Leona Ebara	Staff Physician	Nihon Clinic, Arlington Heights, Illinois

Nephrology

Ziad Al Khouri	Attending Physician	Private Practice
Sangeet Dhillon-Jhattu	Attending Physician	Private Practice
Malgorzata Kochanek	Attending Physician	Private Practice
Fuoad Kutuby	Attending Physician	Private Practice

Pulmonary /Critical Care

Nathan Schoettler	Coggeshall Fellow	University of Chicago
David Wu	Instructor	University of Chicago
Krysta Wolfe	Assistant Professor	University of Chicago

Sleep Medicine

Farbod Ghods	Attending Physician	Kaiser Permanente, California
Amanpreet Kaur	Attending Physician	Valparaiso, IN
Carmela Kiraly	Attending Physician	Ohio

Interventional Pulmonology

Jonathan Kurman	Assistant Professor	Medical College of Wisconsin
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Select High Impact Publications

Department of Medicine faculty are very prolific, publishing nearly 1,600 original articles in a number of outstanding internal medicine and subspecialty journals. Below is a sampling of some recent high impact papers.

Annals of Internal Medicine

1. **Laiteerapong N**; Cooper JM; Skandari MR; Clarke PM; Winn AN; **Naylor RN**; **Huang ES**. Individualized Glycemic Control for U.S. Adults With Type 2 Diabetes: A Cost-Effectiveness Analysis. *Annals of Internal Medicine* 168(3), 2017
2. **Farnan JM**; **Arora VM**. Annals for Hospitalists Inpatient Notes -Gender Equality in Hospital Medicine - Are We There Yet? *Annals of Internal Medicine* 167(6), 2017
3. Graham KL; Auerbach AD; Schnipper JL; Flanders SA; Kim CS; Robinson EJ; **Ruhnke GW**; Thomas LR; Kripalani S; Vasilevskis EE; Fletcher GS; Sehgal NJ; Lindenauer PK; Williams MV; Metlay JP; Davis RB; Yang J; Marcantonio ER; Herzig SJ. Preventability of Early Versus Late Hospital Readmissions in a National Cohort of General Medicine Patients. *Annals of Internal Medicine* 168(11), 2018

Cell

1. Chen YQ; Wohlbold TJ; Zheng NY; Huang M; Huang Y; Neu KE; Lee J; Wan H; Rojas KT; Kirkpatrick E; Henry C; Palm AE; Stamper CT; Lan LY; Topham DJ; Treanor J; Wrammert J; Ahmed R; Eichelberger MC; Georgiou G; Krammer F; **Wilson PC**. Influenza Infection in Humans Induces Broadly Cross-Reactive and Protective Neuraminidase-Reactive Antibodies. *Cell* 173(2), 2018

Journal of the American Medical Association

1. McDermott MM; Spring B; Berger JS; Treat-Jacobson D; Conte MS; Creager MA; Criqui MH; Ferrucci L; Gornik HL; Guralnik JM; Hahn EA; Henke P; Kibbe MR; Kohlman-Trighoff D; Li L; Lloyd-Jones D; McCarthy W; **Polonsky TS**; Skelly C; Tian L; Zhao L; Zhang D; Rejeski WJ. Effect of a Home-Based Exercise Intervention of Wearable Technology and Telephone Coaching on Walking Performance in Peripheral Artery Disease: The HONOR Randomized Clinical Trial. *Journal of the American Medical Association* 319(16), 2018
2. **Anderson I**; **Cifu AS**. Management of Bleeding in Patients Taking Oral Anticoagulants. *Journal of the American Medical Association* 319(19), 2018
3. Waytz J; **Cifu AS**; **Stern. SDC**. Evaluation and Management of Patients with Syncope. *Journal of the American Medical Association* 319(21), 2018
4. **Tung EL**; **Davis AM**; **Laiteerapong N**. Glycemic Control in Nonpregnant Adults with Type 2 Diabetes. *Journal of the American Medical Association* 319(23), 2018
5. Feld L; **Cifu AS**. Management of Dyspepsia. *Journal of the American Medical Association* 319(17), 2018
6. **Volerman A**; **Cifu AS**. Peanut Allergy Prevention. *Journal of the American Medical Association* 319 (9), 2018

7. Mimoto MS; **Oyler JL**; **Davis AM**. Evaluation and Treatment of Hirsutism in Premenopausal Women. *Journal of the American Medical Association* 319(15), 2018
8. **Cotts KG**; **Cifu AS**. Treatment of Osteoporosis. *Journal of the American Medical Association* 319(10), 2018
9. Sargis RM; **Davis AM**. Evaluation and Treatment of Male Hypogonadism. *Journal of the American Medical Association* 319(13), 2018
10. **Shah SD**; **Cifu AS**. From Guideline to Order Set to Patient Harm. *Journal of the American Medical Association* 319(12), 2018
11. **Cifu AS**. Improving Diagnostic Decisions-Reply. *Journal of the American Medical Association* 319(2), 2018
12. Sargis RM; **Davis AM**. Evaluation and Treatment of Male Hypogonadism. *Journal of the American Medical Association*; 319(13), 2018

Journal of Clinical Investigation

1. Kang HS; Kumar D; Liao G; Lichti-Kaiser G; Gerrish K; Liao XH; **Refetoff S**; Jothi R; Jetten AM. GLIS3 is indispensable for TSH/TSHR-dependent thyroid hormone biosynthesis and follicular cell proliferation. *Journal of Clinical Investigation* 127(12), 2017

Lancet

1. Winston DJ; **Mullane KM**; Cornely OA; Boeckh MJ; Brown JW; Pergam SA; Trociukas I; Zak P; Craig MD; Papanicolaou GA; Velez JD; Panse J; Hurtado K; Fernsler DA; Stek JE; Pang L; Su SC; Zhao Y; Chan ISF; Kaplan SS; Parrino J; Lee I; Popmihajlov Z; Annunziato PW; Arvin A. Inactivated varicella zoster vaccine in autologous haemopoietic stem-cell transplant recipients: an international; multicentre; randomised; double-blind; placebo-controlled trial. *Lancet* 391(10135), 2018
2. **Charlton M**. FGF-19 agonism for NASH: a short study of a long disease. *Lancet* 391(10126), 2018

Nature

1. Ward MC; **Gilad Y**. Human genomics: Cracking the regulatory code. *Nature* 550(7675), 2017
2. Michailidou K; Lindstram S; Dennis J; Beesley J; Hui S; Kar S; Lemason A; Soucy P; Glubb D, ... **Olopade OI**;Chanock SJ; Dunning AM; Edwards SL; Bader GD; Chenevix-Trench G; Simard J; Kraft P; Easton DF. Association analysis identifies 65 new breast cancer risk loci. *Nature* 551(7678), 2017
3. Meisel M; Hinterleitner R; Pacis A; Chen H; Earley ZM; Mayassi T; Pierre JF; Ernest JD; Galipeau HJ; Thuille N; Bouziat R; Buscarlet M; Ringus DL; Wang Y; Li Y; Dinh V; Kim SM; McDonald BD; Zurenski MA; Musch MW; Furtado GC; Lira SA; Baier G; Chang EB; Eren AM; Weber CR; Busque L; Godley LA; Verdu EF; **Barreiro LB**; **Jabri B**. Microbial signals drive pre-leukaemic myeloprolieration in a Tet2-deficient host. *Nature* 557(7706), 2018

Nature Genetics

1. Day FR; Thompson DJ; Helgason H; Chasman DI; Finucane H; Sulem P; Ruth KS; Whalen S; Sarkar AK; Albrecht E; Altmaier E; Amini M;... **Im HK**; Hinds D; Murray A; Murabito JM; Stefansson K; Ong KK; Perry JRB. Genomic analyses identify hundreds of variants associated with age at menarche and support a role for puberty timing in cancer risk. *Nature Genetics* 49(6), 2017
2. Phelan CM; Kuchenbaecker KB; Tyrer JP; Kar SP; Lawrenson K; Winham SJ; Dennis J; Pirie A; Riggan MJ; Chornokur G; Earp MA; Lyra PC Jr; Lee JM; Coetzee S; Beesley J; McGuffog L;... **Olopade OI**; ... Pharoah PD. Identification of 12 new susceptibility loci for different histotypes of epithelial ovarian cancer. *Nature Genetics* 49(5), 2017
3. Wu L; Shi W; Long J; Guo X; Michailidou K; Beesley J; Bolla MK; Shu XO; ...; **Olopade OI**; .. Zheng W. A transcriptome-wide association study of 229;000 women identifies new candidate susceptibility genes for breast cancer. *Nature Genetics* 50(7), 2018
4. Gamazon ER; Segre AV; van de Bunt M; Wen X; Xi HS; Hormozdiari F; Ongen H; Konkashbaev A; Derks EM; Aguet F; Quan J; **Nicolae DL**; Eskin E; Kellis M; Getz G; McCarthy MI; Dermizakis ET; Cox NJ; Ardlie KG. Using an atlas of gene regulation across 44 human tissues to inform complex disease- and trait-associated variation. *Nature Genetics* 50(7), 2018
5. Demenais F; Margerite-Jeannin P; Barnes KC; Cookson WOC; Altmuller J; Ang W; Barr RG; Beaty TH; Becker AB; ...; **Nicolae DL**. Multiancestry association study identifies new asthma risk loci that colocalize with immune-cell enhancer marks. *Nature Genetics* 50(1), 2018
6. **Li YI**; Knowles DA; Humphrey J; Barreira AN; Dickinson SP; **Im HK**; Pritchard JK. Annotation-free quantification of RNA splicing using LeafCutter. *Nature Genetics* 50(1), 2018

Nature Medicine

1. McDermott DF; Huseni MA; Atkins MB; Motzer RJ; Rini BI; Escudier B; Fong L; Joseph RW; Pal SK; Reeves JA; Sznol M; Hainsworth J; Rathmell WK; **Stadler WM**; ...; Powles T. Clinical activity and molecular correlates of response to atezolizumab alone or in combination with bevacizumab versus sunitinib in renal cell carcinoma. *Nature Medicine* 24(6), 2018
2. Wong GS; Zhou J; Liu JB; Wu Z; Xu X; Li T; Xu D; ...; **Catenacci D**; Bass AJ. Targeting wild-type KRAS-amplified gastroesophageal cancer through combined MEK and SHP2 inhibition. *Nature Medicine* 24(7), 2018

New England Journal of Medicine

1. Stone RM; Mandrekar SJ; Sanford BL; Laumann K; Geyer S; Bloomfield CD; Thiede C; Prior TW; Dohner K; Marcucci G; Lo-Coco F; Klisovic RB; Wei A; Sierra J; Sanz MA; Brandwein JM; de Witte T; Niederwieser D; Appelbaum FR; Medeiros BC; Tallman MS; Krauter J; Schlenk RF; Ganser A; Serve H; Ehninger G; Amadori S; **Larson RA**; Dohner H. Midostaurin plus Chemotherapy for Acute Myeloid Leukemia with a FLT3 Mutation. *The New England Journal of Medicine* 377(5), 2017

2. Torres VE; **Chapman AB**; Devuyst O; Gansevoort RT; Perrone RD; Koch G; Ouyang J; McQuade RD; Blais JD; Czerwiec FS; Sergeyeva O. Tolvaptan in Later-Stage Autosomal Dominant Polycystic Kidney Disease. *The New England Journal of Medicine* 377(20), 2017
3. Marty FM, Ljungman P, Chemaly RF, Maertens J, Dadwal SS, Duarte RF, Haider S, Ullmann AJ, Katayama Y, Brown J, **Mullane KM**, Boeckh M, Blumberg EA, Einsele H, Snyderman DR, Kanda Y, DiNubile MJ, Teal VL, Wan H, Murata Y, Kartsonis NA, Leavitt RY, Badshah C. Letermovir Prophylaxis for Cytomegalovirus in Hematopoietic-Cell Transplantation. *The New England Journal of Medicine* 377(25), 2017
4. Mehra MR, Goldstein DJ, **Uriel N**, Cleveland JC Jr, Yuzefpolskaya M, Salerno C, Walsh MN, Milano CA, Patel CB, Ewald GA, Itoh A, Dean D, Krishnamoorthy A, Cotts WG, Tatoles AJ, Jorde UP, Bruckner BA, Estep JD, Jeevanandam V, **Sayer G**, Horstmannshof D, Long JW, Gulati S, Skipper ER, O'Connell JB, Heatley G, Sood P, Naka Y; MOMENTUM 3 Investigators. Two-Year Outcomes with a Magnetically Levitated Cardiac Pump in Heart Failure. *The New England Journal of Medicine* 378(15), 2018
5. White WB; Saag KG; **Becker MA**; Borer JS; Gorelick PB; Whelton A; Hunt B; Castillo M; Gunawardhana L. Cardiovascular Safety of Febuxostat or Allopurinol in Patients with Gout. *The New England Journal of Medicine* 378(13), 2018
6. **Bakris G**; **Sorrentino M**. Redefining Hypertension - Assessing the New Blood-Pressure Guidelines. *The New England Journal of Medicine* 378(6), 2018
7. Mateos MV; Dimopoulos MA; Cavo M; Suzuki K; **Jakubowiak A**; Knop S; Doyen C; Lucio P; Nagy Z; Kaplan P; Pour L; Cook M; Grosicki S; Crepaldi A; Liberati AM; Campbell P; Shelekhova T; Yoon SS; Iosava G; Fujisaki T; Garg M; Chiu C; Wang J; Carson R; Crist W; Deraedt W; Nguyen H; Qi M; San-Miguel J. Daratumumab plus Bortezomib, Melphalan, and Prednisone for Untreated Myeloma. *The New England Journal of Medicine* 378(6), 2018
8. Francis PA; Pagani O; **Fleming GF**; Walley BA; Colleoni M; Lang I; Gomez HL; Tondini C; Ciruelos E; Burstein HJ; Bonnefoi HR; Bellet M; Martino S; Geyer CE Jr; Goetz MP; Stearns V; Pinotti G; Puglisi F; Spazzapan S; Climent MA; Pavesi L; Ruhstaller T; Davidson NE; Coleman R; Debled M; Buchholz S; Ingle JN; Winer EP; Maibach R; Rabaglio-Poretti M; Ruepp B; Di Leo A; Coates AS; Gelber RD; Goldhirsch A; Regan MM. Tailoring Adjuvant Endocrine Therapy for Premenopausal Breast Cancer. *The New England Journal of Medicine* 379 (2), 2018

Science

1. Bunker JJ; Erickson SA; Flynn TM; Henry C; Koval JC; Meisel M; **Jabri B**; **Antonopoulos DA**; **Wilson PC**; Bendelac A. Natural polyreactive IgA antibodies coat the intestinal microbiota. *Science* 358(6361), 2017
2. Matson V; Fessler J; Bao R; Chongsuwat T; Zha Y; **Alegre ML**; **Luke JJ**; **Gajewski TF**. The commensal microbiome is associated with anti-PD-1 efficacy in metastatic melanoma patients. *Science* 359(6371), 2018

COMMITTEE
Highlights



Women's Committee

The Department of Medicine's Women's Committee serves as an important mechanism for networking, mentorship, professional development and advocacy for our female faculty. With leadership from Julie Oyler, MD, the Committee is comprised of women from multiple sections within the Department, all of whom are amazing leaders, scientists, clinicians and educators in their own right. The Committee has added a fourth sub-committee to track the number of awards given to women and to nominate women for internal and external awards.

The Women's Committee enjoyed several successes in FY18:

- Published two issues of the "Women at the Forefront" newsletter, highlighting the accomplishments of women faculty and trainees
- Conducted a workshop on "Managing Workplace Conflict," featuring Jan Brett, Professor of Dispute Resolution at Northwestern University's Kellogg School of Management
- Conducted a workshop, "Dynamics of the Gender Gap for Young Professionals in the Financial and Corporate Sectors," featuring Marianne Bertrand, the Chris P. Dialynas Distinguished Service Professor of Economics at the Booth School of Business
- Hosted Tejal Gandhi, MD, MPH, CPPS, President and Chief Executive Officer, NPSF Lucian Leape Institute, and the Certification Board for Professionals in Patient Safety, Clinical and Safety Officer, Institute for Healthcare Improvement, as the Women's Committee's Grand Round Speaker for 2018, who spoke on "Free from Harm"

Diversity Committee

The Department of Medicine actively promotes diversity, community-based research, and understanding (toward eliminating) health care disparities. Led by Monica Vela, MD, and Co-Chair, Milda Saunders, MD, the goal of the Diversity Committee is to build upon the long tradition of excellence in the fields of clinical care, research and education by working to improve diversity among all programs in the Department. In FY18, the Department recruited a diverse housestaff to its residency programs with the intern class of the internal medicine residency (17%) and the emergency medicine residency (33%) programs comprised of underrepresented minorities. The Committee has also shepherded the Housestaff Diversity Committee in its strides to engage in community service events as well as engaging in recruitment and activities to promote an inclusive climate among residents of color.

The Diversity Committee serves to focus and promote activities that improve recruitment, retention, scholarship, leadership, and mentorship of qualified minority students, housestaff and faculty in an environment rich with cultural awareness, and sensitivity. In FY18, under the direction of Dr. Vela, the Bowman Society hosted the Second Annual Black and Latina Women in Medicine Forum: Claiming our Space. Over 60 medical students and residents from all of the medical schools in Chicago attended the

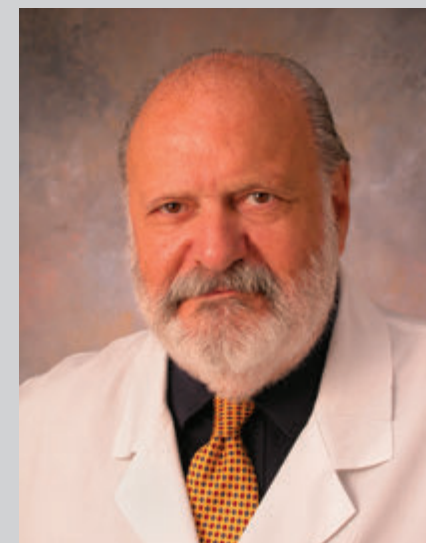
event. The forum was moderated by Dr. Saunders, with participation by Monica Peek, MD and Audrey Tanksley, MD from the Department. Department faculty also helped to lead the second annual "Black and Latino Men in Medicine" forum, and the second annual LGBTQI People in Medicine conference. The Department also had a commanding presence at the Annual Medical Education Conference of the Student National Medical Association in San Francisco and the national Latino Medical Student Association conference held in Miami.

OTHER HIGHLIGHTS FROM FY18 INCLUDE:

- Hosted **Selwyn Rogers, MD**, Professor of Surgery & Chief for Trauma and Acute Care Surgery, as the Diversity Committee's Grand Rounds speaker, who spoke on "The Role of the Trauma Center at the University of Chicago"
- **Milda Saunders, MD** - Appointed Co-Chair of the Chicago Outreach of Minority Living Donors Committee. Dr. Saunders was also awarded the Midwest SGIM Advocacy and Community Service Leadership Award and the Department's 2018 Diversity Award
- **Monica Vela, MD** - Appointed to the Advisory Committee of the National Latino Medical Students Association and the Advisory Committee of the Chicago Medical Organization for Latino Involvement
- **Deborah Burnet, MD** and **Shellie Williams, MD** - Recipients of the Biological Sciences Division's Distinguished Leader in Community Service and Advocacy Awards

LEGACY

The Department of Medicine honors the memory of three extraordinary faculty who served as outstanding scientists, dedicated clinicians and inspirational mentors.



LOUIS COHEN, MD
Professor of Medicine (Cardiology)
(1928 - 2018)



ANGELO SCANU, MD
Professor of Medicine (Cardiology)
(1924 - 2018)



KIRK SPENCER, MD
Professor of Medicine (Cardiology)
(1962 - 2018)

Please visit medicine.uchicago.edu for a full version of the 2018 Department of Medicine Annual Report which includes a full list of sponsored research

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Section of Cardiology

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Alenghat, Francis	Integrin-Triggered Signaling and Macrophage Mode Switching in Atherosclerosis	\$136,085	\$10,887
Broman, Michael	FOG-2 Upregulation Induces Atrial Fibrillation	\$132,037	\$10,563
Liao, James	Cardiovascular Sciences Training Grant	\$483,606	\$36,255
	Mechanisms Underlying Vascular Aging	\$250,000	\$155,000
Ozcan, Cevher	Mitochondrial Mechanisms and Novel Therapeutic Targets in Atrial Fibrillation	\$151,800	\$12,144
Polonsky, Tamar	Myocardial Ischemia & Transfusion (MINT)	\$44,937	\$27,861
	Low Intensity Exercise intervention in PAD: The LITE Trial	\$2,168	\$1,344
	Improve PAD PERFORMANCE with METformin: The PERMET Trial	\$2,801	\$1,737
	Telmisartan Plus Exercise to Improve Functioning in PAD: The TELEX Trial	\$3,252	\$2,016
Total PHS Research		\$1,206,686	\$257,807
STATE/ASSOCIATION/FOUNDATION GRANTS			
Blair, John	Microvascular Dysfunction in Heart Failure with Preserved Ejection Fraction (American Heart Association)	\$70,000	\$7,000
Sladojevic, Nikola	RGS5 as a Novel Therapeutic Target for Ischemic Stroke (American Heart Association)	\$62,560	\$0
Tabit, Corey	Molecular Mechanisms of Non-Surgical Bleeding in Human Patients with Continuous-Flow Left Ventricular Assist Devices (American Heart Association)	\$70,000	\$7,000
Total State/Association/Foundation Grants		\$202,560	\$14,000
INDUSTRY GRANTS			
Blair, John Edward A.	Specific Research Plan for Clinical intelligence-enabled AKI prevention in PCI patients Project (Philips)	\$41,465	\$16,586
Kawaji, Keigo	Next-Generation MRI Systems for Generalized Error-Proof MRI Application Co-Development with Philips Clinical Sciences (Philips)	\$39,286	\$15,714
Paul, Jonathan D.	Targeted Temperature Management in Cardiogenic Shock (ZOLL)	\$27,584	\$5,517
Spencer, Kirk Thomas	Finding-based clinical context delivery (Philips)	\$14,286	\$5,714
Tung, Roderick	Clinical Cardiac Electrophysiology Fellowship Program (Medtronic)	\$30,000	\$0
	Clinical Cardiac Electrophysiology Fellowship Program (Biotronik)	\$10,000	\$0
	Clinical Cardiac Electrophysiology Fellowship Program (St. Jude Medical Research)	\$40,909	\$4,091
	University of Chicago Clinical Cardiac Electrophysiology (CCEP) Fellowship Program (Boston Scientific)	\$15,000	\$0
	Advanced Heart Failure and Transplant Cardiology Fellowship Program (St. Jude Medical Research)	\$36,364	\$3,636
Total Clinical Trials Earnings		\$1,086,287	\$271,572
Total Industry Grants		\$1,341,181	\$322,830
Total Sponsored Research			
Public Health Service		\$3,816,494	\$1,963,339
State/Association/Foundation Grants		\$429,876	\$472,312
Industry Grants		\$885,107	\$1,356,465
TOTAL		\$5,131,477	\$3,792,116
		\$3,868,306	\$3,930,740
		\$1,464,493	\$216,560
		\$1,664,011	\$3,345,064

Section of Computational Biomedicine and Biomedical Data Science

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Grossman, Robert	The Bionimbus Protected Data Cloud - Supplement 1	\$78,097	\$45,296
	Innovation through Collaboration at the Intersection of Childhood Development and Cancer: A Platform for the Gabriella Miller Kids First Pediatric Data Resource Center	\$565,613	\$350,680
	NASA GEO: EF5	\$18,714	\$11,602
	NIAID Data Hub Pilot	\$643,959	\$399,255
	NIH Data Commons Pilot Phase	\$342,214	\$212,173
	Developing and Operating a Data Commons Framework Services	\$1,420,086	\$880,453
	NHLBI Commons Pilot	\$1,153,704	\$715,296
Rzhetsky, Andrey	Training in Emerging Multidisciplinary Approaches to Mental Health and Disease	\$263,282	\$18,503
	2/2-Measuring Translational Dynamics and the Proteome to Identify Potential Brain Biomarkers for Psychiatric Disease	\$289,000	\$171,180
Total PHS Research		\$4,774,669	\$2,804,438
STATE/ASSOCIATION/FOUNDATION GRANTS			
Grossman, Robert	Cohen Veterans Bioscience Data Commons Grant Agreement (CVB)	\$778,822	\$116,823
Total State/Association/Foundation Grants		\$778,822	\$116,823
INDUSTRY GRANTS			
Grossman, Robert	Abbvie Partnership (AbbVie)	\$89,286	\$35,714
Total Industry Grants		\$89,286	\$35,714
Total Sponsored Research			
Public Health Service			\$2,017,868
State/Association/Foundation Grants			\$926,586
Industry Grants			\$125,000
TOTAL			\$3,069,454
			\$8,599,752

Section of Dermatology

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
He, Yu-Ying	Autophagy and GG-NER in UVB-induced skin cancer	\$225,000	\$130,500
	Oxidative Stress, Cr(VI) Carcinogenesis, and Prevention	\$50,000	\$29,000
Total PHS Research		\$275,000	\$159,500
STATE/ASSOCIATION/FOUNDATION GRANTS			
Bolotin, Diana	The Impact of Drug Compounding Regulations on Dermatologic Practice (American Society of Dermatologic Surgery)	\$6,350	\$0
Total State/Association/Foundation Grants		\$6,350	\$-
INDUSTRY GRANTS			
Total Clinical Trials Earnings		\$23,995	\$5,999
Total Industry Grants		\$23,995	\$5,999
Total Sponsored Research			
Public Health Service			\$371,039
State/Association/Foundation Grants		\$310,850	\$305,000
Industry Grants			\$-
TOTAL		\$681,889	\$666,949
		\$901,830	\$874,830
		\$470,844	

Section of Emergency Medicine

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED			
PUBLIC HEALTH SERVICE						
Beiser, David	Mechanical circulatory support: Measures of adjustment and quality of life (MCS A-QOL)	\$23,178	\$13,443			
	Strategies to Innovate EmeRgENcy Care Clinical Trials (SIREN), Mid-America CTSA Consortium (MACC)	\$4,363	\$2,611			
Garcia, Alfredo J	Neurocognitive Consequences of Intermittent Hypoxia	\$218,750	\$112,840			
Padela, Aasim	Informing American Muslims about Living Donation [I AM a LD]	\$137,681	\$85,362			
Prabhakar, Nanduri R.	Integrative Consequences of Hypoxia	\$1,440,360	\$607,332			
	Therapeutic Targeting of Carotid Body Chemoreflex for Sleep Disordered Breathing	\$1,548,556	\$167,955			
Sharp, Willard W.	Pharmacological Induced Torpor/hypothermia as a Novel Therapy for Improving Post Cardiac Arrest Resuscitation Outcomes	\$250,000	\$145,000			
Total PHS Research		\$3,622,888	\$1,134,543			
STATE/ASSOCIATION/FOUNDATION GRANTS						
Hogan, Teresita M.	Developing a National Collaborative to Improve Emergency Department Care of Older Adults (Hartford Foundation)	\$21,600	\$2,160			
Padela, Aasim	Developing a Tailored Mammography Intervention for American Muslims (American Cancer Society)	\$134,954	\$10,796			
	Domesticating Genomics in the Gulf Region (DGGRR): The Missing Islamic Bioethical Discourse (Qatar National)	\$20,007	\$4,002			
	Engaging Muslim Activists for Research on Community Health (E-MARCH) (PCORI)	\$78,045	\$31,218			
	Conversations on Islam and the Human Sciences (Templeton Foundation)	\$77,229	\$6,401			
Total State/Association/Foundation Grants		\$331,835	\$54,577			
Total Sponsored Research			FY 14 FY 15 FY 16 FY17 FY18			
Public Health Service		\$2,191,789	\$3,797,030	\$3,696,644	\$4,568,855	\$4,757,431
State/Association/Foundation Grants		\$285,934	\$234,682	\$261,822	\$253,270	\$386,412
Industry Grants		\$182,173	\$142,173	-	-	-
TOTAL		\$2,659,896	\$4,173,885	\$3,958,466	\$4,822,125	\$5,143,843

Section of Endocrinology, Diabetes & Metabolism

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED			
PUBLIC HEALTH SERVICE						
Bell, Graeme	Diabetes Research and Training Center	\$947,583	\$531,706			
	Integrated Clinical and Basic Endocrinology Research	\$226,522	\$18,122			
Brady, Matthew J.	Circadian Genes and Adipose Function: Impact of Chronotype, Obesity and Race STEP-UP Program	\$293,400	\$144,403			
		\$1,500	\$0			
Dumitrescu, Alexandra M.	Mouse Sbp2 deficiency models the multi-system syndrome of human SBP2 defects Selenoproteins in Arsenic-Induced Metabolic Dysfunction	\$225,000	\$125,489			
		\$13,008	\$8,065			
Ehrmann, David A.	Diabetes Prevention Program Outcomes Study - Phase 2	\$262,229	\$146,601			
	β-cell Function and Cognition in the Restoring Insulin Secretion (RISE) Study	\$33,290	\$19,308			
Naylor, Rochelle	Advancing Recognition and Personalized Genetic Medicine for MODY in a Multi-Ethnic US Population	\$173,200	\$13,776			
	Advancing Recognition and Personalized Genetic Medicine for MODY in a Multi-Ethnic US Population	\$174,589	\$13,807			
Philipson, Louis	Pediatric Endocrinology Research Training - Renewal 01	\$125,835	\$10,065			
	Control Systems for Artificial Pancreas Use During and After Exercise	\$89,775	\$33,934			
	Fault-Tolerant Control Systems for Artificial Pancreas	\$70,835	\$30,184			
	Monogenic Diabetes: Next Generation Diagnosis, Treatment and Complications	\$332,279	\$192,722			
	Chicagoland Diabetes TrialNet Clinical Center	\$256,472	\$118,396			
Refetoff, Samuel	Thyroid Physiology Studies of Inherited Disorders	\$407,004	\$225,957			
Rhodes, Christopher J.	Central Control of Pancreatic Islet Function	\$302,523	\$160,259			
Van Cauter, Eve	Alterations of Sleep and Circadian Timing in Aging	\$315,579	\$183,036			
	Alterations of Sleep and Circadian Timing in Aging	\$447,701	\$259,666			
Total PHS Research		\$4,698,324	\$2,235,496			
STATE/ASSOCIATION/FOUNDATION GRANTS						
Greeley, Siri Atma W.	The Impact of Diabetes in Infancy: Clinical, Qualitative, and Neurodevelopmental Outcome (American Diabetes Association)	\$125,455	\$12,545			
Philipson, Louis	Mechanisms and Potentiators of Arsenic-induced Metabolic Dysfunction (American Diabetes Association)	\$10,465	\$1,047			
Philipson, Louis	Analysis of the Whole Exome in Subjects with Extreme Forms of Type 1 Diabetes (Helmsley Trust)	\$150,000	\$15,000			
Total State/Association/Foundation Grants		\$285,920	\$28,592			
INDUSTRY GRANTS						
Bakris, George	Hypertension Fellowship Program - (RELYPSA)	\$70,000	\$-			
Total Clinical Trial Earnings		\$505,266	\$126,317			
Total Industry Grants		\$575,266	\$126,317			
Total Sponsored Research			FY14 FY15 FY16 FY17 FY18			
Public Health Service		\$7,031,818	\$6,241,384	\$6,431,372	\$4,732,504	\$6,933,820
State/Association/Foundation Grants		\$282,750	\$366,566	\$146,499	\$148,000	\$314,512
Industry Grants		\$994,932	\$1,022,397	\$1,222,825	\$553,960	\$701,583
TOTAL		\$8,309,500	\$7,630,347	\$7,800,696	\$5,434,464	\$7,949,915

Section of Gastroenterology, Hepatology & Nutrition

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Bissonnette, Bruce	Development of 5hmC and 5mC Biomarkers in Cell-free Circulating Extreme Forms of Type 1 Diabetes (Helmsley Trust)	\$409,754	\$203,482
Chang, Eugene B.	Research Training in Digestive Health, Diseases, and Nutrition	\$383,435	\$27,706
	IBD and Mucosal Inflammation, Immunology, and Microbiology of the GI Tract	\$730,723	\$423,819
	Diet Induced Obesity from Gut Microbial Disruption of Host Metabolic Networks	\$522,600	\$204,126
	Exploring Paneth Cell Peptide YY (PYY), a unique anti-microbial peptide that maintains fungal commensalism, in the pathogenesis of ileal Crohn's Disease	\$472,171	\$184,766
Eren, A Murat	Microbial Community Profiles Identify New Indicators of Waterborne Pathogens	\$25,262	\$14,652
Harris, Katharine	Inter-kingdom communication between Intestinal Microbiota and Mammalian Host via Cyclic Dinucleotides	\$61,174	\$0
Jabri, Bana	Innate and adaptive immunity in celiac disease	\$336,380	\$195,100
	Pharmacological Validation of Transglutaminase 2 as a Novel Target for Celiac Disease - Resubmission 01	\$121,564	\$64,939
Kim, Karen	Cook County Colon Cancer Alliance to Reignite and Enhance Screening (Cook County CARES)	\$670,128	\$163,392
	Center for Health Equity Research (CHER)	\$11,519	\$7,142
Kupfer, Sonia S.	Host-Environment Interactions in Colorectal Cancer Disparities	\$108,750	\$67,425
Leone, Vanessa	Diurnal Oscillations in Gut Microbes and Host Immunity in Health and Obesity	\$116,423	\$8,794
Li, Yanchun	Macrophage m6A mRNA Methylation in Sepsis	\$125,000	\$77,500
Messer, Jeannette S	The Role of HMGB1 in Gut Antimicrobial Defense and the Pathophysiology of Inflammatory Bowel Disease	\$113,440	\$9,075
Pekow, Joel R.	New model to dissect molecular pathways in IBD-neoplasia using human colonoids	\$50,000	\$31,000
	Fecal Microbiome Transplant National Registry	\$714	\$286
Pillai, Anjana A	Extracellular non-coding RNA biomarkers of hepatocellular cancer	\$18,518	\$11,482
Rubin, David T.	Fecal Microbiome Transplant National Registry	\$2,829	\$1,754
Total PHS Research		\$4,280,384	\$1,696,440
STATE/ASSOCIATION/FOUNDATION GRANTS			
Chang, Eugene B.	Aberrant Tissue Responses and Microbial Triggers that Promote the Development of UC Pouchitis: Gathering Clues to Understand Human Inflammatory Bowel Diseases (Helmsley Trust)	\$303,531	\$30,352
Meisel, Marlies	Impact of Interleukin 15 on immune homeostasis and the intestinal microbiota in the development of inflammatory bowel disease (Crohn's and Colitis Foundation)	\$58,250	\$0
Messer, Jeannette S	The Role of HMGB1 in the Microbial Pathogenesis of Inflammatory Bowel Disease (American Gastroenterological Association)	\$30,000	\$0
Sakuraba, Atsushi	Collaborative Study to Evaluate the Role of Neutrophil FCγ Receptor 1 (CD64) Index as a New Biomarker for Mucosal Healing (MH) and Histologic Remission (HR) in Inflammatory Bowel Disease (IBD) Patients (SPARC/Indiana University)	\$65,922	\$13,185
Total State/Association/Foundation Grants		\$457,703	\$43,537

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED			
INDUSTRY GRANTS						
Chang, Eugene B.	The University of Chicago Medicine Chicago PROMISE Proposal to Takeda (Takeda)	\$368,697	\$147,479			
Li, Yanchun	2017 ASPIRE US Rheuma IBD - Does the Renin-Angiotensin System Promote Colonic Inflammation through the JAK-STAT Pathways? (Pfizer)	\$107,143	\$42,857			
Rubin, David T.	Center of Excellence for Precision Medicine in IBD Chicago PROMISE (Takeda)	\$286,030	\$114,413			
	Advanced IBD Fellowship 2017-2018 (JAN BIO)	\$83,155	\$8,316			
	IBD SuperFriends: A Peer to Peer Mentoring Program for IBD Patients. (Takeda)	\$57,545	\$5,755			
	IBD SuperFriends (Pfizer)	\$9,091	\$909			
	Advanced IBD Fellows Research Meeting - Gold Level (JAN BIO)	\$30,000	\$0			
	2018-2019 Inflammatory Bowel Disease Patient Education Events (Abbvie)	\$45,455	\$4,545			
	Community GI Updates in IBD Fellowship Program (Pfizer)	\$60,564	\$6,056			
Total Clinical Trial Earnings		\$581,896	\$145,474			
Total Industry Grants		\$1,629,576	\$475,804			
Total Sponsored Research						
		FY14	FY15	FY16	FY17	FY18
Public Health Service		\$5,846,837	\$5,857,444	\$6,373,843	\$6,121,930	\$5,976,824
State/Association/Foundations		\$2,451,084	\$2,318,729	\$1,775,491	\$244,198	\$501,240
Industry Grants		\$2,485,488	\$2,721,045	\$913,065	\$2,510,196	\$2,105,380
TOTAL		\$10,783,409	\$10,897,218	\$9,062,399	\$8,876,324	\$8,583,444

Section of General Internal Medicine

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Arora, Vineet	SIESTA (Sleep for Inpatients: Educating Staff to Act)	\$221,614	\$17,729
IMPROVE		\$158,228	\$91,772
	Mentoring Patient-Oriented Research: Sleep & Health During & After Hospital Stay	\$107,070	\$8,566
	Mentoring Patient-Oriented Research: Sleep & Health During & After Hospital Stay	\$108,570	\$8,686
Baig, Arshiya A.	Implementing Diabetes Group Visits in Midwestern Community Health Centers to Improve Diabetes Outcomes among Disadvantaged Patients	\$202,034	\$125,261
Burnet, Deborah	LUCENT: Leadership for Urban Primary Care Education and Transformation	\$398,344	\$31,656
Chin, Marshall H.	Chicago Center for Diabetes Translation Research	\$248,345	\$144,040
Huang, Elbert	Research and Mentorship in Medical Decision Making in Diabetes	\$163,754	\$13,100
	Cohort Differences in Social Life and Health: Refreshing the NSHAP sample	\$107,706	\$62,469
	Preferences, Management and Outcomes of the Oldest Patients with Diabetes	\$33,168	\$20,564
Miller, Doriane C.	Improving the Screening and Management of Patients with Serious Mental Illness in Primary Care Settings	\$239,871	\$94,749
Total PHS Research		\$1,988,704	\$618,592
STATE/ASSOCIATION/FOUNDATION GRANTS			
Arora, Vineet	VISTA (Value, Improvement, Safety, and Team Advocates): Curriculum & Culture Change to Cultivate Physicians for the Future (American Medical Association)	\$25,000	\$0
Chin, Marshall H.	Reducing Health Care Disparities Through Payment and Delivery System Reform: Evaluation and Dissemination (Johnson Foundation)	\$103,897	\$12,468
	Expert Consulting for the Disparities Portfolio (PCORI)	\$63,550	\$25,420
Laitteerapong, Neda	Examining the U.S. cost-effectiveness of alternative glycemic treatment algorithms in the era of new medications (American Diabetes Association)	\$125,455	\$12,545
Peek, Monica	Shared Decision Making among Vulnerable Populations: The Confluence of Bioethics, Health Disparities and Medical Decision Making (Greenwall Foundation)	\$128,974	\$12,397
Pincavage, Amber	Evaluation of a Virtual Interactive Platform in Enhancing Diagnostic Reasoning and Disparities and Medical Decision Making (Greenwall Foundation)	\$15,909	\$1,591
Saunders, Milda R.	Patient Referral and Education Program for Patients on Renal Replacement Therapy (PREPP RRT (Central Society for Clinical and Translational Research))	\$10,000	\$0
Stern, Scott D. C.	I-Human Deployment (Manipal University)	\$68,753	\$13,751
	Evaluation of Interactive Virtual Technology in Diagnostic Reasoning and accuracy (The Marcus Foundation/American Medical Association)	\$78,497	\$7,850
Wan, Wen	RQ10 for Gastroparesis and Constipation in Parkinson's Disease (Michael J. Fox Foundation/Virginia Commonwealth University)	\$14,519	\$3,630
Total State/Association/Foundation Grants		\$634,554	\$89,652

Section of General Internal Medicine (Continued)

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
INDUSTRY GRANTS			
Peek, Monica	Bridging the Gap National Program Office (Merck Foundation)	\$590,235	\$88,535
Press, Valerie G.	Development of Novel Hospital-initiated Care Bundle in Adults Hospitalized for Asthma Exacerbation: The 41th Multicenter Airway Research Collaboration (MARC-41) Study (NOVAR PH/MASS GEN)	\$28,705	\$11,482
Total Industry Grants		\$618,940	\$100,017

Total Sponsored Research	FY14	FY15	FY16	FY17	FY18
Public Health Service	\$3,635,696	\$3,245,309	\$3,189,214	\$1,940,689	\$2,607,296
State/Association/Foundation Grants	\$2,723,046	\$1,934,873	\$1,374,443	\$1,207,697	\$724,206
Industry Grants	\$-	\$81,997	\$840,992	\$718,957	\$-
TOTAL	\$6,358,742	\$5,180,182	\$4,645,654	\$3,989,378	\$4,050,459

Section of Genetic Medicine

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Basu, Anindita	High Dimensional Single Cell Transcriptomic and Proteomic Analysis and Comparison at High Throughput	\$92,100	\$5,360
Chen, Mengjie	Collaborative Research: Advanced statistical methods for single cell RNA sequencing studies	\$245,902	\$68,848
	Collaborative Research: Advanced statistical methods for single cell RNA sequencing studies	\$255,502	\$58,804
Gilad, Yoav	eQTL mapping in iPSC-derived differentiated cardiomyocytes	\$463,301	\$287,247
	Methods for analysis of regulatory variation in cellular differentiation	\$134,991	\$83,695
	A National iPSC Cell Network with Deep Phenotyping for Translational Research	\$50,000	\$29,000
	Using single cell RNA-seq to study regulatory noise and robustness	\$316,209	\$196,050
	Using single cell RNA-seq to study regulatory noise and robustness	\$313,009	\$194,066
	Characterizing and mapping gene regulatory robustness in cardiomyocytes	\$430,940	\$267,183
Im, Hae Kyung	Predicted Gene Expression: High Power, Mechanism, and Direction of Effect	\$272,518	\$158,060
	Genomic and Transcriptomic Analysis of Emphysema and Subclinical ILD	\$15,589	\$9,042
	Genomic and Transcriptomic Analysis of Breast and Ovarian Cancers	\$16,457	\$10,203
	Genetics of African American Type 2 Diabetes	\$25,679	\$15,921
Melamed, Rachel	Using clinical data to identify FDA-approved drugs for cancer prevention and therapeutic repurposing	\$116,142	\$8,811
Perera, Minoli	Health Disparity in Pharmacogenomics:	\$252,792	\$142,279
Total PHS Research		\$3,001,131	\$1,534,569
STATE/ASSOCIATION/FOUNDATION GRANTS			
Basu, Anindita	Comparison, calibration, and benchmarking of high-throughput single cell RNASeq techniques for unbiased cell-type classification (Chan Zuckerberg Initiative)	\$129,700	\$19,455
Total State/Association/Foundation Grants		\$129,700	\$19,455
INDUSTRY GRANTS			
Total Industry Grants		\$-	\$-

Total Sponsored Research	FY14	FY15	FY16	FY17	FY18
Public Health Service	\$24,501,313	\$7,067,316	\$20,488,400	\$1,441,126	\$4,535,700
State/Association/Foundation Grants	\$204,952	\$149,155	\$149,155	\$-	\$-
Industry Grants	\$-	\$-	\$125,000	\$-	\$-
TOTAL	\$24,706,265	\$7,067,316	\$20,762,555	\$1,441,126	\$4,684,855

* FY14-16 includes Grossman and Rzhetsky.

Section of Geriatrics & Palliative Medicine

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED			
PUBLIC HEALTH SERVICE						
Huisingh-Scheetz, Megan J.	Early Frailty Biomarkers: Patterns of Activity and Energy Expenditure - Resubmission 01	\$144,702	\$11,334			
Kostas, Tia	Primary Care Medication Management for Vulnerable Populations	\$178,613	\$14,289			
Levine, Stacie K.	Illinois AHEC Network Program	\$12,490	\$999			
Thompson, Katherine	South Side Healthy Aging Resource Experts (SHARE) Network	\$713,959	\$26,380			
Total PHS Research		\$1,049,764	\$53,002			
STATE/ASSOCIATION/FOUNDATION GRANTS						
Levine, Stacie	Hospice and Palliative Medicine Fellowship Program (Coleman Foundation)	\$76,500	\$-			
	A Primary Palliative Care Education Program to Improve Access for Patients with Cancer - Phase III (Coleman Foundation)	\$112,995	\$-			
Total State/Association/Foundation Grants		\$189,495	\$-			
INDUSTRY GRANTS						
Levine, Stacie	Hospice and Palliative Medicine Fellowship Program (VITAS)	\$68,182	\$6,818			
Total Industry Grants		\$68,182	\$6,818			
Total Sponsored Research			FY14 FY15 FY16 FY17 FY18			
Public Health Service		\$324,844	\$177,767	\$965,755	\$926,928	\$1,102,766
State/Association/Foundations		\$364,472	\$418,360	\$371,767	\$174,221	\$189,495
Industry Grants				\$75,000	\$-	\$75,000
TOTAL		\$689,316	\$596,127	\$1,412,522	\$1,101,149	\$1,367,261

Section of Hematology/Oncology

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Churpek, Jane	Defining the Role of BRCA1 in Hematopoiesis	\$151,800	\$12,144
Dolan, Mary Eileen	Pharmacogenomics of Childhood Leukemia (ALL)	\$53,125	\$30,813
	Regulation of mRNA Splicing by Intronic Genetic Variants	\$83,390	\$48,366
	Genetic Susceptibility and Biomarkers of Platinum-Related Toxicities	\$75,063	\$43,537
	NCI Youth Enjoy Science Research Education Program (R25) - 2017	\$393,593	\$15,014
Fleming, Gini	Alliance for Clinical Trials in Oncology Operations Center	\$2,792,243	\$725,983
	Alliance NCORP Research Base	\$685,801	\$178,308
	DOD Breast Cancer Research Program	\$28,505	\$7,411
Geeleher, Paul	Novel Computational Approaches for Pharmacogenomic Discovery	\$78,331	\$6,266
Kindler, Hedy	U10 - NCTN (Lead)	\$401,708	\$232,991
Larson, Richard A.	Stopping Tyrosine Kinase Inhibitors in CMP Patients -	\$12,171	\$7,546
Lebeau, Michelle M.	CCSG - CTRP Admin Suppl - P30CAD14599-37S2	\$2,758,304	\$1,710,148
	Molecular mechanisms of myeloid suppressor genes on chromosome 5	\$228,750	\$132,675
	A rapid spontaneous murine model of CN-AML	\$41,500	\$24,070
Liu, Hongtao	TC 557 Radiation Injury Treatment Network (RITN) Agreement FY17	\$4,938	\$3,062
Luke, Jason	Genomic and Commensal Variants Associated with Immunotherapy in Cancer Patients	\$117,037	\$72,563
Olopade, Olufunmilayo	Developing an Oncology Workforce for the 21st Century	\$531,619	\$41,010
	Cancer Genetics Professional Education in a Global Community of Practice	\$23,981	\$1,918
	Returning Genetic Research Panel Results for Breast Cancer Susceptibility	\$45,203	\$26,218
	Case GI SPORE	\$21,577	\$13,378
	Africa Cancer Leaders Institute	\$30,000	\$0
Pearson, Alexander T	A Reasoned Approach to Combination Therapy Development in Head and Neck Cancer	\$148,200	\$11,856
Ratain, Mark J.	Clinical Therapeutics	\$471,038	\$37,683
Sharma, Manish	Genomic Prediction Tools Developed using Phenotypes from Disease Progression Models	\$176,369	\$14,110
	Computational Modeling of Tumor Burden by CT to Advance Cancer Therapeutics	\$20,949	\$12,674
Smith, Sonali	SWOG Network Group Operations Center of the NCTN	\$11,837	\$6,865
Stadler, Walter M.	SPORE in Prostate Cancer	\$319,004	\$185,022
Stock, Wendy	Center for Precision Medicine in Leukemia	\$81,495	\$47,267
Sundaravel, Sriram	Leveraging Epigenetic and Epitranscriptomic Aberrations in Cancer to Identify Molecular Targets for Designing Therapy	\$45,544	\$0
Szmulewitz, Russell Z.	SPORE in Prostate Cancer	\$50,000	\$29,000
Thirman, Michael J.	Ionizing Radiation-Induced Hematological Malignancies	\$36,000	\$22,320
	Instructive role of MLL Fusion Proteins in Lineage Determination and Leukemogenesis	\$502,591	\$91,954
Total PHS Research		\$10,421,666	\$3,792,172

Section of Hematology/Oncology (Continued)

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
STATE/ASSOCIATION/FOUNDATION GRANTS			
Agyeman, Abena S.	Using Hsp90 Inhibitors to Treat Triple Negative Breast cCncer (Susan G. Komen Foundation)	\$60,000	\$0
Conzen, Suzanne D.	Use of Selective GR Antagoists in Castration-resistant Prostate Cancer (Prostate Cancer Foundation)	\$500,000	\$0
Curran, Emily K	Investigating the role of the STING pathway in hereditary malignancies (Cancer Research Foundation)	\$37,500	\$0
Dolan, Mary Eileen	Susan G. Komen Foundation - 2015 (Resubmission) (Susan G. Komen Foundation)	\$135,000	\$0
Drazer, Michael W	Defining Leukemogenic Mechanisms in Hereditary Hematologic Malignancies (Damon Runyan Foundation)	\$110,000	\$0
Fleming, Gini	DNA Repair Therapies for Ovarian Cancer (Ovarian Cancer Research Fund)	\$143,608	\$15,956
Godley, Lucy	CBC Program Management at The University of Chicago (Chicago Community Trust Searle Funds/ Northwestern University)	\$125,000	\$0
	Identification of Germline Predisposition Syndromes in Young MDS Patients (Taub Foundation)	\$181,818	\$18,182
	Modeling Myeloid Malignancies Mediated by Germline RUNX1, ETV6, and ANKRD26 mutations (Leukemia & Lymphoma Foundation)	\$180,018	\$19,982
	CHEK2 mutations as predisposition alleles for inherited hematopoietic malignancies (Cancer Research Foundation)	\$50,000	\$0
	The role of TET3 and HIF on 5-hmC status in hypoxic erythropoiesis (American Society of Hematology)	\$2,000	\$0
	Identifying Inherited Variants that Predispose to Lymphoid Malignancies (V Foundation)	\$180,000	\$20,000
	The Role of BRCA1 in Genomic Instability and Hematopoietic Malignancies (American Society of Hematology)	\$2,000	\$0
	Exploring the Impact of Germline Mutations on the Differentiation of Mesenchymal Stromal Cells into Osteocytes (American Society of Hematology)	\$2,000	\$0
Jakubowiak, Andrzej	Multiple Myeloma Research Consortium Site Grant - Renewal 01 (Multiple Myeloma Research Foundation)	\$53,750	\$10,750
Lebeau, Michelle M.	ACS Institutional Research Grant (American Cancer Society)	\$90,000	\$0
	Study of Myelodysplastic Syndromes - 2017 (Evans Foundation)	\$181,819	\$18,181
Olopade, Olufunmilayo	Genomic Approaches for Primary Prevention of Breast Cancer (American Cancer Society)	\$80,000	\$0
	Translating Breast Cancer Genetics in the Clinic (Susan G. Komen Foundation)	\$160,000	\$40,000
	Implementing Evidence Based Interventions to Reduce Breast Cancer Mortality in Low Resource Settings (Breast Cancer Research Foundation)	\$208,333	\$41,667
	Functional Analysis of SNPs associated with Estrogen Receptor Negative Breast Cancer using CRISPR-Cas9 Technology (Doris Duke Charitable Trust)	\$6,500	\$650
Patnaik, Akash	Combinatorial Immunotherapy Strategies to Reverse Immunosuppression within PTEN-deficient Advanced Prostate Cancers (Prostate Cancer Foundation)	\$500,000	\$0
	Combinatorial Immunotherapy Strategies to Reverse Immunosuppression within PTEN-deficient Advanced Prostate Cancers (Phi Beta Psi Sorority)	\$58,333	\$0
	Perturbing DNA Repair Pathways to Enhance Immune-responsiveness in Prostate Cancer (Cancer Research Foundation)	\$25,000	\$0

Section of Hematology/Oncology (Continued)

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED			
STATE/ASSOCIATION/FOUNDATION GRANTS						
Pearson, Alexander T	Live Cell Imaging of Head and Neck Cancer Stemness and Quiescence (Cancer Research Foundation)	\$37,500	\$0			
Stock, Wendy	A phase III trial to Evaluate the Efficacy of the Addition of Inotuzumab Ozogamicin (a conjugated anti-CD22 monoclonal antibody) to Frontline Therapy in Young Adults (ages 18-39 years) with Newly Diagnosed Precursor B-Cell ALL (Alliance for Clinical Trials in Oncology Foundation)	\$490,647	\$49,065			
Sweis, Randy F	Targeting the non-T Cell Inflamed Tumor Microenvironment in Urothelial Bladder Cancer (Conquer Cancer Foundation)	\$47,501	\$2,499			
	Facilitating immuotherapy responses in non-T cell-inflamed bladder cancer (American Association for Cancer Research)	\$55,000	\$0			
	Innate immune activation to mediate tumor control in bladder cancer (Cancer Research Foundation)	\$37,500	\$0			
Uppal, Sakshi	The Impact of Hypoxia on Epigenetic Changes in Neuroblastoma (Alex's Lemonade Stand Foundation for Childhood Cancer)	\$50,000	\$0			
Veneris, Jennifer Lynn	Glucocorticoid Receptor-mediated Chemotherapy Resistance in Ovarian Cancer (Conquer Cancer Foundation)	\$47,501	\$2,499			
Wickrema, Amittha	Therapeutic targeting of anemia in MDS by modulation of DOCK4 pathway (Leukemia & Lymphoma Foundation)	\$180,018	\$19,982			
Huo, Dezheng	Genetic and Epigenetic Factors in Breast Cancer (Breast Cancer Research Foundation)	\$208,333	\$41,667			
Total State/Association/Foundation Grants		\$4,226,679	\$301,080			
INDUSTRY GRANTS						
Curran, Emily K	Immunologic Role of DDX41 in Development of Hereditary Hematologic Malignancies (Gilead Sciences)	\$59,091	\$5,909			
Kline, Justin P.	To Define and Overcome Immunoregulatory Mechanisms Activated in Leukemia-bearing Mice Treated with STING Agonist Immunotherapy (Merck S&D)	\$12,341	\$4,936			
	Role of TIGIT in T Cell Dysfunction in Leukaemia and Lymphoma (Iteosthera)	\$28,937	\$11,575			
Lim-Seiwert, Tanguy	Immune characterization of head and neck squamous cell carcinomas (HNSCC) and malignant Mesotheliomas to understand the role of ICOS and mechanisms of resistance to anti-PD-1/PD-L1 based immunotherapies (JOUNCE)	\$89,286	\$35,714			
Luke, Jason	Characterization of Siglec- 7/-9 Pathway Expression and Clinical Response to Cancer Immunotherapy (Palleon)	\$76,429	\$30,571			
Patnaik, Akash	Perturbing DNA repair pathways to Enhance Immune-responsiveness in Prostate Cancer (Bristol Myers Squibb)	\$275,102	\$110,041			
Szmulewitz, Russell Z.	Preclinical investigation of ABT-075 in the treatment of high glucocorticoid-receptor expressing enzalutamide-resistant castration-resistant prostate cancer (AbbVie)	\$150,000	\$60,000			
Total Clinical Trial Earnings		\$18,614,906	\$4,653,727			
Total Industry Grants		\$19,306,092	\$4,912,473			
Total Sponsored Research						
		FY 14	FY15	FY16	FY17	FY18
Public Health Service		\$14,977,477	\$10,966,978	\$15,721,229	\$13,938,323	\$14,213,838
State/Association/Foundations		\$5,136,773	\$6,921,685	\$3,220,776	\$4,320,332	\$4,527,759
Industry Grants		\$15,648,868	\$16,364,357	\$17,059,908	\$21,656,896	\$24,218,565
TOTAL		\$35,763,118	\$34,253,020	\$36,001,913	\$39,915,551	\$42,960,162

Section of Hospital Medicine

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED			
PUBLIC HEALTH SERVICE						
Chattopadhyay, Ishanu	ZeD: Zero-Knowledge Discovery Using Data Smashing	\$593,407	\$201,152			
Gibbons, Robert	Computerized Adaptive Testing of Suicidality in LGBT Young Adults	\$71,228	\$28,663			
	Peer-led Suicide Prevention: Promoting Healthy Role Transitions for Military Personnel	\$44,887	\$26,035			
Meltzer, David	Optimizing Youth Suicide Risk Screening in the Emergency Department	\$18,867	\$10,943			
	Bipolar-Schizophrenia Network for Intermediate Phenotypes	\$46,496	\$24,184			
	Advanced Statistical Methods to Improve Federal Surveillance of Medication Safety and Suicide	\$83,463	\$0			
	Short Term Aging-Related Research Program	\$61,479	\$4,918			
	The University of Chicago Patient Centered Outcome Research K12 Training Program	\$601,338	\$48,107			
Prochaska, Michah	Changing Long-Term Care in America: Policies, Markets, Strategy & Outcomes	\$23,546	\$13,657			
	Health Services Training Grant Subaward-Northwestern	\$238,734	\$15,259			
	MD/PhD Program in Medicine, the Social Sciences and Aging	\$199,176	\$9,214			
	CMS Practice Transformation Network	\$133,820	\$52,858			
	African American Cardiovascular pharmacogenetic CONsortium (ACCOuNT): Discovery and Translation	\$401,479	\$232,858			
	ITM 2.0: Advancing Translational Science in Metropolitan Chicago (FP065282-01-PR) - TL1 Component	\$498,300	\$32,184			
	Chicago HIDTA Public Health Analyst (PHA)	\$67,460	\$17,540			
	The Effect of Red Blood Cell Transfusion on Fatigue, Activity and Fatigability in Hospitalized Patients with Anemia	\$147,924	\$11,834			
	Total PHS Research	\$3,231,604	\$729,406			
	STATE/ASSOCIATION/FOUNDATION GRANTS					
Kuttub, Hani	Pre-Hospital Focused Assessment with Sonography for Trauma (FAST) and Time to the Operating Room (OR) (Air Medical Physician Association)	\$2,500	\$0			
Martin, Shannon	Understanding Associations of Maintenance of Certification (MOC) on Resource Utilization and Physician-Reported Knowledge and Experience in Consultation (American Board of Medical Specialities)	\$12,500	\$0			
Meltzer, David	CAPriCORN - Phase II (PCORI/CHI COMM)	\$80,576	\$32,231			
	Longitudinal Effects of the Comprehensive Care Physicians Program (Donaghue Foundation)	\$181,755	\$18,176			
	Effects of Oral Health on Systemic Health, Oral Health & Healthcare Programs (George E. Richmond Foundation)	\$508,291	\$0			
	Critical Time Intervention in a Criminal Justice Setting (LJAF)	\$333,151	\$32,165			
	Longer Term Social and Cost Benefits of Early MH Treatment for Child Sexual Abuse Victims (Robert Wood Johnson Foundation)	\$66,964	\$8,036			
Total State/Association/Foundation Grants	\$1,266,313	\$122,839				
INDUSTRY GRANTS						
Edelson, Dana	eCART Lite: Detecting Clinical Deterioration in the Continuous Monitoring Data (EARLYSENSE) Hospital Using Limited Clinical Variables and	\$82,143	\$32,857			
Total Clinical Trial Earnings	\$82,143	\$32,857				
Total Industry Grants	\$82,143	\$32,857				
Total Sponsored Research		FY14	FY15	FY16	FY17	FY18
Public Health Service		\$4,207,548	\$4,519,439	\$3,666,163	\$5,092,695	\$3,961,010
State/Association/Foundation Grants		\$405,711	\$1,444,109	\$1,177,457	\$1,551,425	\$1,389,152
Industry Grants		\$124,920	\$371,813	\$-	\$115,000	\$-
TOTAL		\$4,613,259	\$6,088,468	\$5,215,433	\$6,644,120	\$5,465,162

Section of Infectious Diseases and Global Health

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED			
PUBLIC HEALTH SERVICE						
Eavou, Rebecca	Comprehensive PrEP Retention in Care (PrEP-RC)	\$162,652	\$16,265			
Khanna, Aditya S.	Assessing and Modeling Network-level Consequences of Patient Navigation	\$53,873	\$33,401			
	Employing eSBI in a Community-based HIV Testing Environment for At-risk Youth Towards Implementation of Hybridized HIV Testing Strategies to Optimize Care Continuum Metrics	\$70,716	\$41,015			
McNulty, Moira C.	Optimizing Patient-Oriented Outcomes for Chronic Hepatitis C - Renewal 01	\$12,233	\$7,584			
	Pre-Release Linkage to HCV, HIV, and Addiction Services (PRELINK) Ending transmission of HIV, HCV, and STDs and overdose in rural communities of people who inject drugs (ETHIC)	\$155,595	\$90,245			
Pho, Mai Tuyet	Healthcare Associated Infection Prevention 2018	\$149,979	\$92,985			
	University of Chicago Expanded HIV Testing and Linkage to Care for Disproportionately Affected Populations in Healthcare Settings on the South Side and West Side of Chicago	\$384,683	\$204,516			
Pisano, Jennifer C.	Third Coast Center for AIDS Research	\$16,261	\$10,082			
	Anti-infective Stewardship using the Wisca tool in the Electronic Medical Record	\$1,037,032	\$100,660			
Pittrak, David	Center for Prevention Implementation Methodology for Drug use and HIV	\$54,602	\$33,853			
	Insurance Coverage Expansion (ICE): A collaboration to increase and strengthen access to care among men and their networks	\$32,879	\$19,070			
Ridgway, Jessica P.	HIV intervention Models for Criminal Justice involved Substance-using Black MSM	\$63,864	\$6,386			
	HIV intervention Models for Criminal Justice involved Substance-using Black MSM	\$467,939	\$161,959			
Schneider, John A.	Accelerating PrEP Diffusion through Network Change Agents	\$133,532	\$15,390			
	Impact of Neighborhoods and Networks on HIV Risk and Care	\$228,385	\$98,220			
Scherer, Renslow	Comprehensive High Impact HIV Prevention Projects for Community-Based Organizations	\$195,687	\$15,655			
	Center for Prevention Implementation Methodology for Drug use and HIV	\$231,093	\$0			
Total PHS Research	Center for Prevention Implementation Methodology for Drug use and HIV	\$51,048	\$29,608			
	Insurance Coverage Expansion (ICE): A collaboration to increase and strengthen access to care among men and their networks	\$452,551	\$134,888			
Scherer, Renslow	PrEP Uptake and Adherence Among Young Black MSM: Neighborhood and Network Determinants	\$304,644	\$188,879			
	Keeping it LITE: Exploring HIV Risk in Vulnerable Youth with Limited Interaction	\$47,354	\$29,359			
Scherer, Renslow	Syphilis in Chicago: Epidemiology, Sexual Networking and Modeling for Prevention Next-Generation	\$185,218	\$112,057			
	Phylogenetics-targeted Partner Service Models for Combined HIV Prevention	\$572,806	\$245,127			
Total PHS Research	\$5,083,145	\$1,688,685				
STATE/ASSOCIATION/FOUNDATION GRANTS						
Eavou, Rebecca	South Side Social Network Strategy (S4 Program) (Center for Disease Control/Chicago Department of Public Health)	\$141,036	\$14,104			
Scherer, Renslow	South Side PrEP Project (S2P2) (Center for Disease Control/Chicago Department of Public Health)	\$141,035	\$14,104			
	WUMER Project (Sino American Medical School, Wuhan University)	\$1,388,063	\$0			
Total State/Association/Foundation Grants	\$1,670,134	\$28,208				
INDUSTRY GRANTS						
Pittrak, David	Expanded Testing and Linkage to Care (XTLC) (Gilead Sciences)	\$338,652	\$33,865			
Ridgway, Jessica P.	GSK Database Study-DUA (Glaxo Smith Kline)	\$131,762	\$52,705			
Total Clinical Trial Earnings	\$357,074	\$89,269				
Total Industry Grants	\$827,488	\$175,839				
Total Sponsored Research		FY14	FY15	FY16	FY17	FY18
Public Health Service		\$1,185,772	\$2,006,111	\$4,939,253	4,375,800	\$6,771,830
State/Association/Foundation Grants		\$580,038	\$1,582,822	\$1,533,603	1,369,719	\$1,698,342
Industry Grants		\$1,362,267	\$1,476,058	\$950,764	642,126	\$1,003,327
TOTAL		\$3,128,077	\$5,064,991	\$7,423,620	6,387,645	\$9,473,499

Section of Nephrology

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Chapman, Arlene Beth	A Metabolomic Approach to Discovering Markers for ADPKD Progression	\$28,401	\$16,473
	Kansas PKD Research and Translation Core Center Consortium for Radiologic Imaging Studies of Polycystic Kidney Disease (CRISP) IV: Prognosis for End-Stage Renal Disease and Biomarker Validation	\$28,171	\$13,280
		\$62,656	\$34,477
Hassan, Hatim A.	Calcium Oxalate Kidney Stones: Pathogenesis of Obesity-associated Hyperoxaluria	\$217,500	\$126,150
Koyner, Jay L.	Intrarenal Oxygenation: An Early Marker for Risk of Developing AKI	\$6,338	\$3,675
Worcester, Elaine M.	Pathogenesis of Calcium Nephrolithiasis	\$46,120	\$28,594
	Pathogenesis of Calcium Nephrolithiasis	\$1,163,225	\$283,274
Total PHS Research		\$1,552,411	\$505,923

STATE/ASSOCIATION/FOUNDATION GRANTS			
Ko, Benjamin S.	Kidney TREKS Program (American Society of Nephrology)	\$90,000	\$0
	Kidney TREKS Program (American Society of Nephrology)	\$90,000	\$0
Total State/Association/Foundation Grants		\$180,000	\$0

INDUSTRY GRANTS			
Hassan, Hatim A.	Therapeutic Potential of Oxalobacter formigenes-derived Factors for Hyperoxaluria, Hyperoxalemia, and related Kidney Stones (OXALO)	\$78,572	\$31,428
Total Clinical Trial Earnings		\$328,967	\$82,242
Total Industry Grants		\$407,539	\$113,670

Total Sponsored Research		FY14	FY15	FY16	FY17	FY18
Public Health Service		\$2,623,945	\$3,268,846	\$1,931,796	\$652,272	\$2,058,334
State/Association/Foundation Grants		\$6,900	\$404,067	\$687,377	\$-	\$180,000
Industry Grants		\$114,900	\$313,974	\$279,439	\$248,554	\$521,209
TOTAL		\$2,745,745	\$3,986,887	\$2,898,612	\$900,826	\$2,759,543

Section of Pulmonary/Critical Care

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Camacho, Daniel	IRF4+ Respiratory Dendritic Cells in type 2 Inflammatory Responses	\$49,044	\$0
Churpek, Matthew M.	Predicting In-hospital Cardiac Arrest Using Electronic Health Record Data Sepsis Early Prediction and Subphenotype Illumination Study (SEPSIS)	\$151,800	\$12,144
		\$255,669	\$130,123
Fang, Yun	Coronary Artery Disease locus 1p32.2 and miR92a-PPAP2B Signaling in Endothelial Mechanobiology	\$250,000	\$149,048
	Coronary Artery Disease locus 1p32.2 and miR92a-PPAP2B Signaling in Endothelial Mechanobiology	\$250,000	\$149,048
	Spatial Delivery of microRNA Inhibitor via Targeted Polyelectrolyte Complex Micelles to Treat Atherosclerosis.	\$250,000	\$144,766
Guzy, Robert David	Mechanism of Fibroblast Growth Factor 2-Mediated Alveolar Epithelial Repair	\$151,800	\$12,144
Hamanaka, Robert	Metabolic Regulation of Epidermal Homeostasis	\$78,488	\$6,279
Mokhlesi, Babak	TODAY2 Phase 2 (T2P2): Long-Term Post-Intervention Follow-Up Study	\$6,973	\$4,044

Section of Pulmonary/Critical Care (Continued)

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Mutlu, Gokhan M.	Macrophage Responses to Epithelial Dysfunction Promote Lung Fibrosis in Aging Particulate Matter-Induced Changes in DNA Methylome and Transcriptome	\$34,433	\$19,971
	The Role of Alveolar Macrophage Beta-2 Adrenergic Receptors in Acute Lung Injury	\$391,005	\$226,783
		\$400,000	\$232,000
Noth, Imre	Study of Co-trimoxazole and Proton Pump Inhibition Using Pragmatic Design in Idiopathic Pulmonary Fibrosis - CleanUP-IPF	\$8,157	\$4,731
	Architectural Structure and Regulation of TOLLIP in IPF	\$507,056	\$287,982
Olopade, Christopher O.	Summer Program to Increase Diversity in Biomedical Research & Physician Workforce	\$129,700	\$10,376
Solway, Julian	Mendelian Disease - Asthma Comorbidity to Find Subgroup-Specific Asthma Genes TET1-mediated 5-hydroxymethylcytosine Modification and Airway Hyperresponsiveness	\$498,852	\$270,147
	Preclinical development of myosolvins, a new class of medicine for asthma	\$25,000	\$14,500
	ITM 2.0: Advancing Translational Science in Metropolitan Chicago	\$1	\$0
Sperling, Anne I.	Research Training in Respiratory Biology	\$4,166,342	\$1,671,288
	IRF4+ Respiratory Dendritic Cells in type 2 Inflammatory Responses	\$676,948	\$50,516
		\$250,000	\$149,048
Tasali, Esra Fatma	Sleep Extension To Reduce Diabetes and Obesity Risk	\$384,621	\$169,925
Verhoef, Philip	Type 2 Immune Responses Protect Against the Morbidity and Mortality of Sepsis	\$151,800	\$12,144
White, Steven	Azithromycin and the Airway Microbiome in Asthma	\$277,941	\$97,217
	Chicago Metropolitan Asthma Consortium for Severe/Exacerbation-Prone Asthma	\$273,616	\$113,760
Total PHS Research		\$9,619,246	\$3,937,984

STATE/ASSOCIATION/FOUNDATION GRANTS			
Guzy, Robert David	FGF regulation of myofibroblast differentiation (American Lung Association)	\$40,000	\$0
	FGF Regulation of Myofibroblast Differentiation (Central Society for Clinical and Translational Research)	\$10,000	\$0
	Mechanism of Gremlin-1 in the Development of Pulmonary Fibrosis (Pulmonary Fibrosis Foundation)	\$21,739	\$3,261
	Educational Award (Embassy of the Arab Republic of Egypt)	\$7,000	\$0
Hamanaka, Robert	Metabolic Regulation of lung fibrosis (American Thoracic Society)	\$40,000	\$0
Hoddy, Kristin	The Microbiome as a Mediating link between the Effect of Diet Quality on Sleep Quality (Dietitians in Integrative and Functional Medicine)	\$1,000	\$0
Krishack, Paulette	Type 2 Inflammatory Response Protects Against Staphylococcus aureus Induced Sepsis (American Heart Association (Midwest))	\$50,350	\$0
Naureckas, Edward	American Lung Association Asthma Clinical Research Network (American Lung Association)	\$19,246	\$0
	Cystic Fibrosis Foundation Practice Guidelines Update (Cystic Fibrosis Foundation)	\$26,018	\$0
	Award for a Mental Health Coordinator (Cystic Fibrosis Foundation)	\$50,000	\$4,000
Patel, Bhakti	Impact of early mobilization on insulin resistance and ICU-acquired weakness (Parker B. Francis Foundation)	\$52,000	\$0
Total State/Association/Foundation Grants		\$317,353	\$7,261

INDUSTRY GRANTS			
Dulin, Nickolai	Testing Compounds for Efficacy Against Pulmonary Fibrosis (Sequebx)	\$41,142	\$16,457
Hogarth, Douglas Kyle	Interventional Pulmonology Fellowship at The University of Chicago (Medtronic)	\$25,000	\$0
	Interventional Pulmonology Fellowship at The University of Chicago (Boston Scientific)	\$30,000	\$0
Total Clinical Trial Earnings		\$322,491	\$80,623
Total Industry Grants		\$418,633	\$97,080

Total Sponsored Research		FY14	FY15	FY16	FY17	FY18
Public Health Service		\$12,594,100	\$14,426,748	\$17,680,416	\$9,940,793	\$13,557,230
State/Association/Foundation Grants		\$71,971	\$316,361	\$818,564	\$396,894	\$324,614
Industry Grants		\$874,585	\$756,872	\$855,821	\$681,125	\$515,713
TOTAL		\$13,540,656	\$15,499,981	\$19,354,801	\$11,018,812	\$14,397,557

Section of Rheumatology

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
PUBLIC HEALTH SERVICE			
Alegre, Maria-Luisa	Infections and The Stability of Transplantation Tolerance	\$980,000	\$607,600
	Impact of Microbiota on Alloimmune Responses in Transplantation	\$250,000	\$139,432
	The Microbiota and Allograft Rejection: Novel Investigations into the Consequences of Obesity	\$83,333	\$51,666
Clark, Marcus Ramsay	In situ Adaptive Immunity in Human Lupus Tubulointerstitial Nephritis	\$220,000	\$127,600
	University of Chicago Autoimmunity Center of Excellence	\$241,435	\$134,464
	Medical Scientist National Research Service Award	\$1,183,435	\$54,350
	Regulation of Ig-kappa recombination during B lymphopoiesis	\$297,607	\$164,244
	BRWD1 in Adaptive Humoral Immunity	\$125,000	\$77,500
	Autoimmunity Center of Excellence Clinical Research Program - Collaborative Project	\$265,037	\$158,371
Gounari, Fotini	How beta-catenin Expands Foxp3+RORgammat+ Pro-inflammatory T-regulatory Cells	\$294,082	\$103,602
Liarski, Vladimir Michael	Characterizing in situ T Cell-Dendritic Cell Networks in Human Lupus Nephritis and Renal Allograft Rejection	\$150,641	\$12,052
Wilson, Patrick C.	Vaccine Induced Immunity in the Young and Aged	\$66,537	\$38,591
	System Biological Analysis of Innate and Adaptive Responses to Vaccination	\$85,803	\$44,197
	NIAID Centers of Excellence in Influenza Research and Surveillance	\$24,691	\$15,309
	NIAID Centers of Excellence in Influenza Research and Surveillance	\$391,400	\$227,012
	Evaluating the Role of Immunodominant Epitopes in Limiting B Cell Responses upon Repeated Influenza Vaccination	\$123,457	\$76,543
	Mechanisms of Broadly Neutralizing Humoral Immunity Against Influenza Viruses	\$344,519	\$199,821
	Studies of Human B Cell Tolerance, from a Humanized Mouse Model to Human Beings	\$11,679	\$6,774
	Impact of Prior Influenza Exposures on Antibody Repertoires to New Viral Strains	\$9,494	\$5,506
Total Public Health Service Grants		\$5,148,150	\$2,244,634
STATE/ASSOCIATION/FOUNDATION GRANTS			
Dua, Anisha B.	Amgen Fellowship Training Award (RRF)	\$50,000	\$0
Gounari, Fotini	Tracing mechanisms of genomic instability induced by beta-catenin (American Society of Hematology)	\$150,000	\$0
Ko, Kichul	Lupus Clinical Investigators Network (LuCIN) (Alliance for Lupus Research)	\$40,000	\$0
Lei, Yuk Man	The Role of Microbiota in Allograft Rejection - Resubmission 02 (American Heart Association (Midwest))	\$25,950	\$0
Mathur, Priya	Transcriptional and epigenetic roles for B-catenin in the Genomic Instability and Oncogenic Transformation of T-cell Leukemia/Lymphoma (Leukemia & Lymphoma Foundation)	\$57,143	\$2,857
Wilson, Patrick C.	Evaluation of Safety and Immunogenicity of chimeric HA Expressing Live-Attenuated and Inactivated Universal Influenza Virus Vaccines in Phase I Clinical Trials (Gates Foundation)	\$68,182	\$6,818
Total State/Association/Foundation Grants		\$391,275	\$9,675

Section of Rheumatology (Continued)

PRINCIPAL INVESTIGATOR	TITLE OF FUNDED GRANT	ANNUAL DIRECT COSTS AWARDED	ANNUAL INDIRECT COSTS AWARDED
INDUSTRY GRANTS			
Total Clinical Trial Earnings		\$101,800	\$25,450
Total Industry Grants		\$101,800	\$25,450
Total Sponsored Research		FY14	FY15
Public Health Service		\$4,771,826	\$6,847,760
State/Association/Foundations		\$266,759	\$206,759
Industry Grants		\$262,105	\$179,652
TOTAL		\$5,300,690	\$7,234,171

Sponsored Research for the Department of Medicine Grand Total	FY14	FY15	FY16	FY17	FY18
Public Health Service	\$9,153,042	\$74,900,188	\$93,449,876	\$63,889,941	\$83,346,963
State/Association/Foundations	\$13,521,116	\$16,926,325	\$12,480,096	\$11,199,945	\$11,904,392
Industry Grants	\$22,810,425	\$18,136,196	\$23,656,805	\$27,974,511	\$31,920,989
Total	\$127,863,583	\$109,962,709	\$129,586,777	\$103,064,397	\$127,172,344

