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The major priorities within the Division continue to focus on the recruitment of physician-scientists, the reorganization of the clinical services, and the education and training of hematology-oncology fellows and Internal Medicine housestaff.

We are pleased to highlight the following faculty recognitions and awards in FY 2019-2020:

- **Michael Boyiadzis, MD**, was promoted to Professor of Medicine. He chairs the Society for Immunotherapy of Cancer (SICT) Committee that is focused on the development of national guidelines for the use of immunotherapies in acute leukemias.

- **Adam M. Brufsky, MD, PhD**, is the PI of the NCI-funded UG1 grant that supports the conduct of phase 3 clinical trials that are developed by the NCI cooperative groups.

- **Timothy Burns, MD, PhD**, was awarded an NCI R01 grant that is investigating the HGF-MET-TWIST1 pathway and its role in the development of resistance to EGFR TKI therapies. He was also awarded the 2019 HemOnc Today NExtGen Innovators Award to highlight his stature in the field of lung cancer as both a clinician and clinical investigator.

- **Edward Chu, MD**, is the PI of the NCI-funded UM1 grant that supports the conduct of phase 1 and phase 2 clinical trials that are developed and coordinated by NCI-CTEP.

- **Diwakar Davar, MD**, was awarded a grant from the Melanoma Research Foundation that is focused on developing neoadjuvant immunotherapy in patients with stage III melanoma and predictive biomarkers and an NCI R01 grant that is developing new immunotherapy combination regimens in melanoma.

- **Laura M. DeCastro, MD, MHSc**, is serving a 4-year term as a member of the American Society of Hematology (ASH) Committee on Practice and is also a member of the ASH Committee on Training and Practice.

- **Robert Ferguson, PhD**, was awarded an NCI R01 grant that is focused on developing a mobile device and cognitive behavioral therapy for chemotherapy-related cognitive...
Edward Chu, MD  
Chief, Division of Hematology-Oncology  
Professor of Medicine and Pharmacology & Chemical Biology  
Associate Director, UPMC Hillman Cancer Center  
Associate Director, Drug Discovery Institute

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Associate Professor of Medicine

Nathan Bahary, MD, PhD  
Associate Professor of Medicine and Molecular Genetics & Biochemistry  
Medical Director, Pancreatic Cancer Program  
Co-Director, UPMC Pancreatic Cancer Center of Excellence

Riyue Bao, PhD  
Research Associate Professor of Medicine  
Co-Director of Bioinformatics, UPMC Hillman Cancer Center

Chitralekha Bhattacharya, PhD  
Research Instructor of Medicine

Franklin A. Bontempo, MD  
Associate Professor of Medicine  
Medical Director, Coagulation Laboratory

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Associate Professor of Medicine  
Director, Clinical and Translational Research Program

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Professor of Medicine  
Associate Chief, Division of Hematology/Oncology  
Co-Director, Comprehensive Breast Cancer Center  
Associate Director, Clinical Investigation

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Co-Director, Women’s Cancer Research Center, Magee-Womens Research Institute

Melissa A. Burgess, MD  
Assistant Professor of Medicine

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Assistant Professor of Medicine

Lan G. Coffman, MD, PhD  
Assistant Professor of Medicine

Diwakar Davar, MD  
Assistant Professor of Medicine

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Director of Benign Hematology, Vitalant and Hillman Cancer Center  
Director of Clinical Translational Research, Sickle Cell Center of Excellence

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Director, UPMC Hematopoietic Stem Cell Laboratories  
Director, HCC Flow Cytometry Facility

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Jan Drappatz, MD  
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Associate Director, Adult Neuro-Oncology Program

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Professor of Medicine

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Research Instructor of Medicine

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Rimi Hazra, PhD  
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Maria Kapetanaki, PhD  
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Gregory J. Kato, MD  
Professor of Medicine  
Director, Adult Sickle Cell Center of Excellence  
Principal Investigator, Vascular Medicine Institute

John M. Kirkwood, MD  
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Co-Leader, Melanoma and Skin Cancer Program

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Medical Director, Hemapheresis and Blood Services, CBB/Vitalant

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Chief, Adult Neuro-Oncology Service
Anna E. Lokshin, PhD  
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Director, Luminex Core Facility

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Adjunct Faculty, Human Computer Interaction Institute, Carnegie Mellon University

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Director, UPMC Adult Sickle Cell Disease Program  
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Ellen M. Ormond, PhD  
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Amma T. Owusu-Ansah, MD  
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Division Chief, Hematology/Oncology, VA Pittsburgh Healthcare System

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Associate Director of Training, Biobehavioral Medicine in Oncology Program

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Research Assistant Professor of Medicine

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Professor of Medicine and Clinical Translational Science  
Director, Hemophilia Center of Western PA

Priya Rastogi, MD  
Associate Professor of Medicine

Robert L. Redner, MD  
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Linda B. Robertson, DPH, MSN  
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Associate Director, Health Equity and Community Outreach & Engagement

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Malabika Sen, PhD  
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Director, Hematopoietic Stem Cell Transplant and Cell Therapy  
Vice-Chief of Hematologic Malignancies, Hematopoietic Stem Cell Transplantation and T cell Immunotherapy

Roy E. Smith, MD  
Professor of Medicine

Ashwin Somasundaram, MD  
Assistant Professor of Medicine

Richard A. Steinman, MD, PhD  
Associate Professor of Medicine and Pharmacology  
Associate Dean and Director, Medical Scientist Training Program

Quanhong Sun, PhD  
Research Instructor in Medicine

Darcy L. Thull, MS  
Instructor in Medicine  
Genetic Counselor, UPMC Cancer Genetics Program

Gijsberta J. van Londen, MD, MS  
Associate Professor of Medicine

Liza C. Villaruz, MD  
Associate Professor of Medicine

Antoinette Wozniak, MD  
Visiting Professor of Medicine  
Associate Director, Clinical Research, UPMC Hillman Cancer Center  
Director, Lung Cancer Disease Unit  
Co-Director, UPMC Lung Cancer Center of Excellence

Dan P. Zandberg, MD  
Associate Professor of Medicine  
Director, Head and Neck and Thyroid Cancer Disease Sections  
Co-Director, UPMC Hillman Cancer Center Head and Neck Cancer Research Program

Hassane M. Zarour, MD  
Professor of Medicine, Immunology, and Dermatology  
James W. and Frances G. McClothlin Chair in Melanoma Immunotherapy Research  
Co-Leader, Melanoma Program
dysfunction and to conduct a multi-center randomized controlled clinical trial.

- **John Kirkwood, MD**, was appointed Distinguished Professor by the University of Pittsburgh.
- **Anna Lokshin, PhD**, was awarded two new NCI R01 grants, with one grant focused on the development of novel ovarian cancer biomarkers for early detection and the other one focused on development of novel biomarkers for detection of pancreatic cancer.
- **Carissa Low, PhD**, was awarded an NCI R37 grant that focuses on developing a mobile sensing system to monitor symptoms during systemic chemotherapy.
- **Megan Mantica, MD**, was awarded a NeuroNEXXT Clinical Research Award.
- Four Division faculty members were awarded the 2019 HemOnc Today NExtGen Innovators Award to highlight their stature in their respective disease areas, and they include **Yana Najjar, MD** (melanoma); **Diwakar Davar, MD** (melanoma); **Jason Luke, MD** (melanoma); and **Dan Zandberg, MD** (head and neck cancer).
- **Yana Najjar, MD**, is the PI of a grant recently awarded from the Melanoma Research Alliance to investigate the evolution of metabolic and immune dysfunction in in-transit melanoma.
- **Margaret V. Ragni, MD, MPH**, is a member of the FDA Blood Products Advisory Committee, and serves on several other committees for the Hemostasis & Thrombosis Research Society of North America, International Society of Hemostasis and Thrombosis, and National Hemophilia Foundation.
- **Richard Steinman, MD, PhD**, continues to play an important role in the education and training mission of the University of Pittsburgh School of Medicine as he continues to serve as Director of the MSTP Program, Director of the PSTP Program, and Director of the Physician-Scientist Incubator.
- **Antoinette Wozniak, MD**, was appointed Editor-in-Chief of the journal *Clinical Lung Cancer*.
- **Hassane Zarour, MD**, is the corresponding PI of a recently awarded, multi-PI NCI R01 grant that is developing new neoadjuvant immunotherapy combination regimens in melanoma.
The Division of Hematology-Oncology is composed of 39 clinical faculty and 14 research faculty who are dedicated to excellence in patient care, teaching the next generation of physician-scientists, and conducting innovative cancer-focused basic, clinical, translational, and population research.

In addition, there are 77 members of the voluntary faculty, the majority of whom are employed by UPMC Hillman Cancer Center and practice in a UPMC Hillman Cancer Center site in western Pennsylvania and/or eastern Ohio.

Inpatient Service

In FY2018-2019, Division faculty continued to focus on clinical care, which includes the inpatient service and the outpatient clinic at the Hillman Cancer Center. The Division realized an 7% increase in inpatient WRVUs and a stable outpatient WRVU total when compared with FY2017-2018. Total WRVUs billed for FY2018-2019 were 89,571 (excluding psycho-oncology faculty and staff). In 2019, the Division saw an overall 2% increase in total WRVUs.

There are three inpatient oncology/solid tumor attending services at UPMC Shadyside, and these services are coordinated with our clinical colleagues from the UPMC Hillman Cancer Center. Two of these inpatient services are staffed by Advanced Practice Providers and Hospitalist Nocturnists, while the third service is the housestaff teaching service supported by Fellows, Internal Medicine Interns and Residents, and Hospitalist Nocturnists. A total of 4,716 patient admissions were seen by these three inpatient services. The overall number of admissions represents a 7% increase from FY2017-2018. This number does not include inpatient oncology admissions to Magee-Womens Hospital, where patients with breast cancer are admitted to a dedicated inpatient hospitalist service. These patients are seen by the inpatient oncology consult service, which is staffed by Division faculty members.

In addition to the inpatient attending services, there are 10 solid-tumor oncology and hematology consult services:

- Bone Marrow and Stem Cell transplant at UPMC Shadyside
- Hematologic Malignancy consults at UPMC Shadyside
- Hematologic Malignancy consults at UPMC Presbyterian and Magee-Womens Hospital
- Benign Hematology consults at UPMC Presbyterian and Magee-Womens Hospital
- Benign Hematology consults at UPMC Shadyside
- Solid Tumor Oncology consults at UPMC Shadyside
- Solid Tumor Oncology consults at UPMC Presbyterian and Magee-Womens Hospital
- Neuro-Oncology consults at UPMC Shadyside, UPMC Presbyterian, and Magee-Womens Hospital
- Hematology/Oncology consults at the Pittsburgh VA Medical Center
Until July 2020, there was also an inpatient consult service—initially established in FY15—to care specifically for patients with sickle cell disease (SCD). This service provided comprehensive inpatient care at UPMC Presbyterian and Magee-Womens Hospital of UPMC. Drs. Enrico Novelli, Laura De Castro, and Gregory Kato were the three faculty members who staffed this service, which was also supported by advance practice providers. In addition, Hematology/Oncology fellows provided weekend coverage for this SCD service. After the departure of Dr. Kato earlier this year, the shortfall in attending coverage along with the need to further increase residents and fellows’ training in SCD, prompted the benign hematology faculty to incorporate the SCD consult service within the Benign Hematology inpatient consult service.

**Outpatient Service**

Division faculty continue to have robust outpatient clinical practices at the Hillman Cancer Center and Magee-Womens Hospital. Both are hospital-based clinics and since June 1, 2013, both outpatient services fall under the umbrella of Magee-Womens Hospital as a hospital-based practice.

Since October 2013, faculty based at the Hillman Cancer Center have used Aria, an electronic medical record (EMR). This system was designed specifically for use by medical oncologists and allows for the ordering and dispensing of chemotherapeutic agents. At Magee-Womens Hospital, our breast cancer medical oncologists use Epic, which is the EMR used by the rest of the UPMC clinical programs.

**Benign Hematology**

The Division has a Benign Hematology Section with more than 10 physician-scientists and research investigators, and this group is now considered to be one of the largest benign hematology programs in the U.S. As a result of recent growth, grant funding and participation in clinical trials have increased, continued positive upward trajectory over the next few years is expected.

Hemophilia is one of the real strengths of our benign hematology program. The leader of the hemophilia program is Dr. Margaret Ragni, one of the world’s pre-eminent leaders and whose clinical and research activities are housed in the state-of-the-art Hemophilia Center of Western Pennsylvania (HCWP).

The Benign Hematology Section continues to enjoy an extremely close collaboration with Vitalant, Inc (previously, the Institute for Transfusion Medicine) and together they continue their efforts to focus on project planning and program building of the Benign Hematology Center of Excellence, funded by a federal government HRSA grant. This Center provides needed comprehensive outpatient clinical services for the spectrum of thrombosis and hemostasis disorders. It also conducts state-of-the-art clinical and translational research in this population with an emphasis on hemophilia. In parallel with the Center’s planning and development phases, patient-specific treatment plans, protocols, and guidelines of care have been established, updated, individualized and delivered to patients within an outpatient Day Hospital care model, currently housed in the UPMC Hillman Cancer Center. These clinical improvement and quality assurance interventions have been paired with efforts at increasing patient’s uptake of disease-modifying treatments, particularly in SCD, where three newly approved FDA disease-specific therapies—crizanlizumab, L-glutamine, and voxelotor—have joined hydroxyurea and chronic blood transfusion. As a major focus of the benign hematology clinical program, individualized pain management protocols have been developed and personnel have been hired to longitudinally support these efforts.

The UPMC Adult Sickle Cell Program is currently staffed by two dedicated faculty members (Drs. De Castro and Novelli), three APPs, and other health care professional, and is one of the largest in the country. The program recently opened a new ambulatory intensive management (AIM) clinic, a monthly clinic aimed at providing comprehensive, holistic care to those patients with SCD with the highest health care utilization. The AIM clinic is staffed by MDs, APPs, 1 social worker, nurses, 1
psychologist, 1 psychiatrist, and representatives of the Children’s Sickle Cell Foundation, a community-based organization.

As of 2020, the longstanding efforts to identify a new location for the Benign Hematology clinics have resulted in three major developments. First, major progress has been made towards relocating the Benign Hematology outpatient clinics and infusion center from the Shadyside campus to Presbyterian Hospital and the Oakland area, where dedicated space is being identified. This move, if successful, will expand the capacity of the infusion center and reposition the fulcrum of the outpatient Benign Hematology activities into the Oakland campus, where closer collaboration with other Internal Medicine Divisions will be spurred. Second, a parallel effort is being conducted to secure the financial stability of the Section by exploring the feasibility of a 340B program for Benign Hematology. Third, the clinical research team supporting the Benign Hematology research studies has relocated to the Kaufmann building and administratively away from the Hillman Clinical Research Services team and under the umbrella of the Department of Medicine. The clinical research team, named ARCH, includes 6 clinical research staff members and oversees >20 clinical studies, primarily in SCD, but with a growing number of protocols in other areas of benign hematology such as acquired platelet disorders and autoimmune hemolytic anemias. ARCH members, in collaboration with other staff members from the Department of Medicine, are actively developing a hematology database, titled Orchestra, that will greatly aid research activities and will harness the information contained in various electronic medical records.

The physical and administrative move of the ARCH team to Oakland has resulted in a stronger and more cohesive team that is able to manage all aspect of clinical research, e.g., protocol and infrastructure development, regulatory and budgetary management, study coordination, patient engagement and data safety review.

A major priority of the Benign Hematology Section is to actively recruit junior and mid-career academic-oriented hematologists to increase the research and clinical expertise portfolio of the Section. In particular, efforts have been oriented towards hiring experts in the science of hemostasis and thrombosis and in the area of rare hematological disorders. A national search is being conducted via multiple strategies.

**Psycho-Oncology Program**

The Section of Psycho-Oncology brings together both behavioral health for oncology patients, with faculty who span both clinical and research activities. Under the title “The Center for Counseling and Cancer Support (CCCS),” clinicians added important medical leadership as Robin Valpey, MD, assumed the role of medical director, working closely with Jack Cahalane, PhD, who serves as Program Director. The clinical staff at CCCS includes 3 psychiatrists and 5 clinical psychologists, as well as one full-time nurse with expertise in oncology. Patients are seen across various sites, including our main site in the Shadyside Medical Building, as well as Magee-Womens Hospital and UPMC Passavant.

**Benign Hematology Telemedicine**

The Benign Hematology Section has been at the forefront of value-based quality of care and health care economics-based initiatives for many years. In response to the coronavirus pandemic, the Benign Hematology Section has successfully adopted telemedicine-based patient management. The faculty has rapidly transitioned 25%-30% of the outpatient encounters to telemedicine, and the goal over the next year is to increase the proportion of encounters that are managed by telemedicine to 40%-50%, particularly focusing on continuation of care and longitudinal follow up. In-person management will be reserved for new consults, thus increasing capacity in this area, and for those interventions that require a treatment in clinic (e.g., transfusions and infusions of biologicals and chemotherapeutics).

In addition, the Section has opened a weekly rapid access clinic (RAC) directed to decrease the wait time for new patient referrals and consults. The RAC clinic is primarily manned by Dr. Roy Smith, one of the Section’s senior faculty members, who has pioneered eConsults and telemedicine, and is now actively spearheading other value-based interventions, including the development of a Section-wide hematology eConsult service and the organization of direct oral anticoagulant therapy and thrombophilia testing at UPMC.
The group continues to provide a wide range of clinical services to cancer patients and their families, including management of mood disorders, anxiety, sleep and appetite disturbances, substance use disorders, cognitive impairments, and other neuropsychiatric manifestations of cancer and its treatment. In addition to individualized care, we are expanding services to include group-based interventions, with a 4-session Memory and Attention Adaptation Training class for treatment of cancer-related cognitive impairment and a monthly Caregiver Group. Increasing emphasis has been placed on providing telemedicine services, in hopes of reaching even more of our underserved population in the Western Pennsylvania region and beyond.

The Center is also expanding collaboration with other services both inside and out of UPMC to provide optimal care. In addition to ongoing direct clinical care of shared patients, we have continued collaborating with Palliative Care outpatient providers through a monthly inter-disciplinary team meeting, and with hematologists caring for the sickle cell population in biweekly case collaboration meetings. We also frequently collaborate with our colleagues seeing inpatient consultations through Consult-Liaison Psychiatry services and hope to continue to expand our role for hospitalized cancer patients going forward. We have also had increasing collaboration with community partners that provide support for our cancer patients, both in providing educational lectures and mutual outreach.

Educational opportunities have continued to expand both for medical and psychology trainees. The formal residency elective in psycho-oncology through the Department of Psychiatry has been revamped for the upcoming academic year, and Consult-Liaison Psychiatry fellows continue their 6-month rotation at our main site in Shadyside, with development of more formalized curriculum and structure training in Memory and Attention Adaptation Training. Graduate psychology trainees are also participating at various clinical sites (both inpatient and outpatient) with our psychologists, and clinical experiences are offered for fellows in palliative care, breast oncology surgery and other oncology programs, with frequent shadowing of most clinicians in our group.

The Center for Counseling and Cancer Support continues its close partnership with the research arm, the HCC Biobehavioral Oncology Research Program, under the direction of Dana Bovbjerg, PhD. Together, they are working to identify opportunities for clinical and translational research and to develop innovative care approaches. Providers remain active in the local, national, and international communities through research collaborations, speaking invitations, and participation in symposiums, panel discussions, and poster presentations at local and national conferences.

The following are this year’s updates on the work of our esteemed colleagues (in alphabetical order):

Dr. Angela Dean, Clinical Assistant Professor in the Department of Psychiatry, serves patients in three locations (UPMC Magee Women's Hospital, UPMC Shadyside, and UPMC Passavant). She supervises graduate psychology students in provision of health care services at UPMC Passavant, with a focus on developing integrated care within the cancer center and provision of care to both patients and family members affected by cancer. As such, she began a monthly educational series for caregivers at UPMC Passavant Hospital, which has been well received by the community and Cancer Center colleagues. In March, she partnered with Dr. Ferguson in presenting research on cognitive dysfunction at the national meeting of Society of Behavioral Medicine. She is also an active member of the caregiving and health care disparities special interest groups for the American Psychosocial Oncology Society. Because of her commitment to providing interdisciplinary care, Dr. Dean will be teaching students in the Medical Interviewing course through the School of Medicine in the Fall of 2019, and she has been invited to present at the 6th Annual Wound Care Conference hosted by UPMC Wound Healing Services.

Dr. Rob Ferguson, Assistant Professor of Medicine, has continued to work in cognitive-behavioral treatment for cancer-related cognitive impairment, and he has had numerous grant-funded research projects sponsored by NCI, NIH Office of Research on Women's Health, and the Beckwith hospital.
Division of Hematology/Oncology

Foundation. In the latest academic year, he has submitted an R01 proposal for a multisite clinical trial of cognitive-behavioral management of cancer-related cognitive dysfunction for breast cancer survivors with colleagues at Indiana University, Simon Cancer Center, with fMRI brain imaging to evaluate post-treatment cortical activation changes. A new grant from the Shadyside Hospital Foundation was received this year in collaboration with Dr. Annette Duensing of the HCC Cancer Therapeutics Program to track neurocognitive function of patients with gastrointestinal stromal tumors. Dr. Ferguson has also received a grant from MiroHealth, a technology company developing an ipad-artificial intelligence based neurocognitive assessment tool for evaluation among breast cancer survivors. In the coming months, he will be working with Oxford University Press on publishing the book titled, “Memory and Attention Adaptation Training: A Cognitive-Behavioral Treatment Program for Cancer Survivors.”

**Dr. Shelly Kucherer**, Assistant Professor of Psychiatry, is joining the Center for Counseling and Cancer Support in August 2019 after completing a fellowship in consultation-liaison psychiatry at UPMC. During her residency and fellowship, one of her clinical interests focused on psycho-oncology, and she had several projects related to this interest during her training. In collaboration with Dr. Robert Ferguson, she developed a group program for cancer-related cognitive dysfunction, which is currently being offered as a free service to patients and their caregivers. Another research interest is focused on sexual dysfunction in cancer survivors, and she recently published a manuscript in General Hospital Psychiatry with Dr. Valpey.

**Dr. Carissa Low**, Assistant Professor of Medicine, has continued to grow the Mobile Sensing + Health Institute with support from the UPMC Hillman Cancer Center and Carnegie Mellon University. Over the past one year, she has hired technical and data science staff and launched a new internship with the University of Pittsburgh School of Computing and Information to provide biobehavioral oncology research training opportunities to computer and data science students. In recognition of her novel research in this field, she was recently awarded a 5-year $2 million R37 MERIT award from the National Cancer Institute to fund a project that will combine smartphone and wearable sensor data with machine learning to remotely monitor symptoms during chemotherapy and to develop and test within the Gastrointestinal Oncology clinics a system that automatically triggers patient-provider contact when severe symptoms are detected. She also initiated a NCI-funded randomized controlled trial investigating the effects of a perioperative sedentary behavior intervention on postoperative outcomes in surgical oncology patients. Dr. Low was invited to present her research at the International Congress of Behavioral Medicine in Santiago, Chile, as well as at the Association for Psychological Science Convention in Washington, DC, and she serves as an Associate Editor for the International Journal of Behavioral Medicine.

**Dr. Ellen Ormond**, Assistant Professor of Medicine, continues to focus on QI initiatives for the Division. Current projects include: (1) Collaboration with Division medical oncologists and Palliative Care to add an Advanced Care Planning template to ARIA and to improve ACP conversation at UPMC Hillman Cancer Center; (2) Evaluating the use of the RAI (Risk Assessment Index) and PROs at Magee hospital as predictors of frailty; (3) A survey of Advance Care Planning documents in the inpatient oncology EMR at Shadyside Hospital. An abstract on this project has been accepted for ASCO’s Quality Symposium for September 2019; and (4) Collaboration with Hematology and Palliative Care at the Hillman Cancer Center to initiate palliative care for all geriatric AML and MDS patients, and all high-risk allogeneic stem cell transplant patients. Dr. Ormond serves on the Shadyside Quality and Safety Committee, and planning committees for the Shadyside Oncology Emergency Department and UPMC’s Safenet project. Over the past year, she has worked with the Oncology-Hematology Fellowship Program on ASCO’s Resilience Skills Training for first-year oncology fellows, and has lectured on burnout and stress management for HCC physicians and medical teams.

**Dr. Donna Poslusny**, Assistant Professor of Medicine, continues to play an important role in the Division’s education and training mission as the Associate Director of Training, Biobehavioral Medicine in Oncology Program. On the research front, she is piloting a behavioral intervention to help al-
logeneic hematopoietic cell transplantation (HCT) patients and their family caregivers manage each component of the post-HCT regimen together, thus improving psychological and health outcomes, in preparation for a NIH grant submission. She was recently awarded pilot funds from the newly formed University of Pittsburgh Center for Caregiver Research, Education, and Training to conduct a study investigating the family caregiver’s role at the hospital, when the patient is admitted for a long period of time (e.g., one month), and the impact on patient and caregiver psychological and health outcomes.

Dr. Robin Valpey, Assistant Professor of Psychiatry, has continued to follow her passion of providing optimal psychiatric care for medically complex patients, particularly those with co-occurring disorders. Given her additional expertise in both eating disorders and addiction, she has utilized these skills in direct management of patients and in dissemination to colleagues through local grand rounds presentations, national poster and oral presentations (Academy of Consult-Liaison Psychiatry 2018, American Psychosocial Oncology Society 2019), and publications (sexual health in female cancer survivors). Since the departure of the former Medical Director in December 2018, she has expanded her leadership role to facilitate optimum patient care, with development of monthly physician meetings and increased collaboration/integration with both clinical providers and research colleagues in various service lines throughout UPMC. She is excited for her new role as Medical Director, with specific vision of expanding both inpatient and outpatient services in innovative ways in order to address the needs of cancer patients, particularly those most underserved.
QUALITY IMPROVEMENT INITIATIVES

Over the past year, significant efforts have been placed on quality improvement activities relating to patient care. The admission process for cancer patients from the ED, clinic, home, etc., was dramatically revamped due to curriculum changes in the fellowship program that caused increased time to admission and frustration. Education of various hospital staff, and primarily the ED, was implemented, including a 3-pager system. These efforts resulted in a significant improvement in the flow of patient admissions from the ED as well as a significantly decreased time to admission for our patients.

Another area for improvement related to the effective transfer of cancer patients from the ICU to the regular nursing floor. A new paging process was instituted that added “warning” pages to the admitting teams—and direct phone calls were used between the ICU and oncology teams. These two initiatives have resulted in a marked improvement in the number of “missed” patients.

Standardization of Inpatient CPR Status Discussions and Documentation within the Division of Hematology-Oncology and UPMC Shadyside.

Medical professionals are trained to provide life-sustaining and cardiac resuscitation measures for admitted hospital patients. However, not all patients desire such aggressive measures. The lack of discussion and/or documentation about resuscitation preferences has led to care incongruous with patient’s wishes (as previously documented or reported to providers or family members). In 2016, an average of 45% of patients admitted to the inpatient hematology and oncology services at UPMC Shadyside had a code status discussion documented prior to discharge. The aim of this quality improvement project was to improve the quality and rates of CPR status conversations with our cancer patients admitted to the inpatient service. A working group was formed in January 2017, and it comprised key stakeholders representing oncology physicians and fellows, palliative care faculty, oncology nursing, advance practice providers (APPs), and internal medicine house staff. A quality improvement (QI) proposal was developed and approved by the UPMC Quality Improvement Committee in February 2017. All oncology faculty, fellows, housestaff, and advance practice providers were reminded weekly to complete CPR status conversations and documentation. APPs were formally trained by palliative care specialists to discuss and document CPR/code status with all admitted patients. Hospital leadership received a monthly update of CPR status documentation rates. Since implementation of this project in 2017, there has been a significant improvement in the CPR status orders, which rose to >80%. In July 2017, 82% of our patients at UPMC Shadyside had a documented CPR status assessment at discharge, and this high level of >80% has continued over the past year. Formal system-wide expectations are being developed by the CPR assessment workgroup that all admitted patients should have CPR/Code status discussion and documentation upon admission.

Overall, the Division has found that standardization of CPR status assessment with formal training of clinicians and APPs has resulted in a significant increase in the number of CPR status assessments on the inpatient setting, which has been sustained >80%. This practice has been so successful that a manuscript the reports on the important QI project has recently been accepted to the Journal of Oncology Practice, which is a highly respected peer-reviewed journal sponsored by the American Society of Clinical Oncology.
CLINICAL LOCATIONS

1. **Hematology/Oncology at UPMC Hillman Cancer Center**
   5115 Centre Avenue
   Pittsburgh (Shadyside), PA, 15232
   Includes **Center for Counseling and Cancer Support**
   5110 Centre Avenue, Suite A-140
   Pittsburgh (Shadyside), PA 15232

2. **Women’s Cancer Center—Magee-Womens Hospital of UPMC**
   300 Halket Street, Suite 4628
   Pittsburgh (Oakland), PA 15213
   Includes **Center for Counseling and Cancer Support**
   300 Halket Street, Suite 0704 (Ground Floor)
   Pittsburgh (Oakland), PA 15213

3. **Center for Counseling and Cancer Support—UPMC Passavant**
   9100 Babcock Boulevard, Ground Floor
   Pittsburgh, PA 15237

4. **Center for Counseling and Cancer Support—UPMC McKeesport**
   Mansfield Building, D Level
   1500 Fifth Avenue
   McKeesport, PA 15132
The Division continues to place a high priority on clinical and translational research. Clinical faculty devote considerable time and effort to developing clinical trials that investigate novel agents and/or combination regimens.

The Division faculty continue to play important roles in the Phase I, Phase II, and Phase III clinical drug development programs. These are supported by the NCI with Dr. Chu serving as the PI of the NCI UM1 grant that funds Phase 1 and Phase 2 clinical trials, and Dr. Brufsky serves as the PI of the NCI UG1 grant that supports the Phase 3 clinical program. In FY2019-2020, Division faculty enrolled over 1,200 patients on therapeutic and non-therapeutic clinical trials.

Research Grants

Among the several key faculty members with noteworthy peer-reviewed grants are:

- **Edward Chu, MD**, is PI of the NCI T32 training grant focused on cancer therapeutics.
- **Edward Chu, MD**, is PI of the NCI UM1 grant focused on the development and conduct of Phase 1 and Phase 2 clinical trials. This grant represents a collaborative effort between HCC and the Albert Einstein Cancer Center as its second consortium partner.
- **Adam Brufsky, MD, PhD**, is PI of the NCI UG1 grant titled "NCTN Network Lead Academic Site."
- **Tim Burns, MD, PhD**, is PI of newly funded NCI R01 grant titled “Targeting the HGF-TWIST1 Pathway to Overcome EGFR TKI Resistance in NSCLC."
- **Diwakar Davar, MD**, is PI of a grant from the Melanoma Research Foundation that is focused on developing neoadjuvant immunotherapy in patients with stage III melanoma and predictive biomarkers and a newly awarded multi-PI NCI R01 grant that is developing new neoadjuvant immunotherapy combination regimens in locally advanced melanoma.
- **Robert Ferguson, PhD**, is PI of a newly funded NCI R01 grant titled “Developing a Mobile Device and Cognitive Behavioral Therapy for Chemotherapy-Related Cognitive Dysfunction”. 
- **Jim Herman, MD**, is PI of the NCI-sup-
Division of Hematology/Oncology

RESEARCH EXPENDITURES
FY16-FY20

TRACTS AWARDED

- 24% Public Health Service
- 2% Other Federal
- 2% State
- 15% Society and Foundations

RESEARCH EXPENDITURES
FY16-FY20

FY20

FY19

FY18

FY17

FY16

0 5M 10M 15M 20M 25M

DIRECT INDIRECT
ported U01 grant titled “Ultrasensitive Detection of Tumor Specific DNA Methylation Changes for the Early Detection of Lung Cancer”.

- **Charles Horn, PhD**, is PI of an NIDDK grant titled “Therapeutic Potential of Vagal Neurostimulation to Reduce Food Intake”.

- **Greg Kato, MD**, was awarded the first benign hematology T32 training grant at UPMC to train the next generation of physician scientists with a focus in benign hematology. This grant leverages the expertise of both the clinical and basic science faculty at the Vascular Medicine Institute and in the Section. With his departure, **Drs. Novelli and Ragni** have assumed the roles as Co-PIs of this training grant.

- **Carissa Low, PhD**, is PI of a new NCI grant titled “A Mobile Sensing System to Monitor Symptoms During Chemotherapy”.

- **Yana Najjar, MD**, is PI of the U.S. Department of Defense grant “Metabolic Remodeling of the Tumor Microenvironment to Improve the Efficacy of Immunotherapy” and is the PI of a grant recently awarded from the Melanoma Research Alliance to investigate the evolution of metabolic and immune dysfunction in in-transit melanoma.

- **Hassane Zarour, MD**, is PI of 2 NCI R01 grants “Targeting TIGIT and PD-1 in Melanoma” and “Fecal Microbiota Transplant and PD-1 Blockade in Melanoma”. He is the corresponding PI of a recently awarded multi-PI NCI R01 grant that is developing new neoadjuvant immunotherapy combination regimens in melanoma.

**Research Service**

Division of Hematology-Oncology faculty members are deeply committed to advancing this nation’s research agenda, and they play important roles on various committees of the National Cancer Institute, the National Institutes of Health, and other federal agencies, as well as major professional cancer-focused organizations. This list highlights some of these noteworthy committees:

- **Len Appleman, MD, PhD**, is a member of the Eastern Cooperative Group Genitourinary Core Committee and a member of the NCI Renal Cancer Task Force.

- **Nathan Bahary, MD, PhD**, is a member of the NCI Pancreatic Task Force of the GI Cancer Steering Committee.

- **Edward Chu, MD**, serves as a member of the following committees: the NCI Investigational Drug Steering Committee, the NCI Experimental Therapeutics Committee, the American Association of Cancer Research Scientific Program Committee, and the NCI Subcommittee F Study Section on Training.

- **Laura DeCastro, MD, MHSc**, is a member of the American Society of Hematology Committee on Practice and a member of the Food and Drug Administration Orphan Products Development Committee.

- **Jan Drappatz, MD**, is a member of the Alliance Cooperative Group Neuro-oncology Committee.

- **Leisha Emens, MD, PhD**, is a member of the Board of Directors of the Society for Immunotherapy of Cancer. She is also a member of the Oncology Drugs Advisory Committee (ODAC) for the US food and Drug Administration.

- **Deborah Galson, PhD**, is a member of the Scientific Program Committee for the American Society for Bone and Mineral Research and the ASBMR Finance Committee.

- **John Kirkwood, MD**, is a member of the ECOG-ACRIN Scientific Planning Committee and the ECOG-ACRIN Principal Investigator Committee. He just stepped down as chair of the ECOG-ACRIN Melanoma Committee and continues to serve as a member of that committee. Among his other memberships are the Society for Immunotherapy of Cancer.
• **Frank Lieberman, MD**, is a member of three ECOG-ACRIN panels: the Biomarkers Committee, the Experimental Imaging Committee, and the CNS Tumor Committee. He also serves on the NCI Adult Brain Tumor Consortium.

• **Anna Lokshin, PhD**, is a member of the NCI Cancer Prevention Research Small Grant Program Committee and a member of the NIH SBIR/STTR Cancer Diagnostic and Treatment Committee.

• **Enrico Novelli, MD, MS**, is a member of the American Heart Association Study Section and a member of the NIH SBIR/STTR Study Section.

• **Solomon Ofori-Acquah, PhD**, is a member of the NIH Respiratory Integrative Biology and Translational Science Study Section. He also serves on the ASH Minority Medical Student Award Committee, and he chairs the ASH Minority Graduate Student Abstract Achievement Award Committee.

• **Priya Rastogi, MD**, is a member of the NCI Breast Cancer Steering Committee.

• **Margaret Ragni, MD, MPH**, is a member of the FDA Blood Products Advisory Committee, the American Society of Hematology (ASH) Scientific Committee on Hemostasis, and the National Health Foundation Medical and Scientific Advisory Committee.

• **Warren Shlomchik, MD**, is a member of the NCI Cancer Immunology and Immunopathology Study Section.

• **Josie van Londen, MD**, is a member of the ASCO Cancer Survivorship Committee, the ASCO Geriatric Oncology Special Interest Group Committee, and the ASCO Survivorship Guideline Advisory Committee.

• **Antoinette Wozniak, MD**, is a member of the Southwest Oncology Group (SWOG) Lung Committee and a member of the Scientific Committee of the International Association for the Study of Lung Cancer (IASCLC).

• **Hassane Zarour, MD**, is a member of the NCI Experimental Therapeutics SBIR Study Section and has served as a reviewer for the NCI SPORE Program.
Faculty Research Interests and Activities

Edward Chu, MD Division Chief
Dr. Chu conducts basic, clinical, and translational cancer research. His basic research interests have focused on characterizing the molecular mechanisms underlying the development of cellular drug resistance, especially as it relates to the fluoropyrimidine class of anticancer agents. His research group was the first to identify translational autoregulation as a novel regulatory mechanism in eukaryotes for controlling the expression of the folate-dependent enzymes, thymidylate synthase, and dihydrofolate reductase. His clinical translational research efforts have focused on identifying novel drugs and treatment strategies for colorectal cancer and other GI cancers and in developing early-phase I/II clinical trials. Dr. Chu has a strong interest in integrating Chinese herbal medicine with standard cancer chemotherapy with the goal of enhancing clinical activity and reducing the toxicity associated with chemotherapy. The Chu lab has been investigating the potential role of antisense and siRNAs as novel therapeutic molecules for the treatment of colorectal cancer. The goal of these studies is to identify novel molecules to prevent and/or overcome the development of cellular drug resistance to inhibitor compounds that target thymidylate synthase, a well-established target for cancer chemotherapy. The Chu lab observed that siRNAs were significantly more potent and specific in their ability to repress TS mRNA translation, resulting in potent inhibition of TS synthesis. Moreover, they were able to completely restore chemosensitivity to anticancer agents that target TS, including the fluoropyrimidines and TS antifolate inhibitors.

Study Sections
- Member/Reviewer, International Grant Review Committee, National Health Research Council of Italy, 2005-present
- Member/Reviewer, University Grants Committee, University of Hong Kong, 2005-present
- Member/Reviewer, Grants Committee, Singapore National Medical Research Council, 2008-present

Advisory Committee Memberships and Leadership Positions
- Taiwan Cooperative Oncology Group, National Health Research Institutes of Taiwan, Taiwan, 1998-present
- Scientific Advisory Board, Division of Clinical Research, National Health Research Institutes of Taiwan, Taiwan, 1999-present
- Chair, Clinical Research Committee, Consortium for Globalization of Chinese Herbal Medicine, 2003-present
- Scientific Advisory Board, Celator, Vancouver, BC, 2005-present
- Scientific Advisory Board, Albert Einstein Cancer Center, Bronx, NY, 2006-present
- Scientific Advisory Board, Dartmouth-Hitchcock Norris Cotton Cancer Center, Lebanon, NH, 2007-present
- Co-Leader, Cancer Therapeutics Program, UPMC Hillman Cancer Center, 2010-present
- Member, Biomarkers Steering Committee, UPMC Hillman Cancer Center, 2010-present
- Member, Clinical Executive Committee, UPMC Hillman Cancer Center, 2010-present
- Member, Clinical Research Oversight Committee, UPMC Hillman Cancer Center, 2010-present
- Member, Senior Leadership Committee, UPMC Hillman Cancer Center, 2010-present
- Scientific Advisory Board, Saladex, Bethlehem, PA, 2010-present
- Investigational Drug Steering Committee, National Cancer Institute, 2010-present
- Member, Hematology/Oncology Fellowship Curriculum Committee, UPMC Hillman Cancer Center, 2011-present
- Member, Material Transfer Agreement Exception Committee, University of Pittsburgh, 2011-present
- Member, Oncology EMR Governance Committee, UPMC Hillman Cancer Center,
2011-present
• Scientific Advisory Board, Salzburg Therapeutics, Winston-Salem, NC, 2011-present
• Chair, Scientific Advisory Board, University of Vermont Cancer Center, Burlington, VT, 2012-present
• Experimental Therapeutics Committee (NeXT), National Cancer Institute, 2012-present
• Scientific Advisory Board, Herbert Irving Columbia Cancer Center, New York, NY, 2012-present
• Scientific Advisory Board, USC Norris Cancer Center, Los Angeles, CA, 2012-present
• Member, Chemical Biology Facility Committee, UPMC Hillman Cancer Center, 2013-present
• Scientific Advisory Board, Case Western Seidman Cancer Center, Cleveland, OH, 2013-present
• Scientific Advisory Board, Medical University of South Carolina Hollings Cancer Center, NCI Cancer Centers, Charleston, SC, 2013-present
• Member, Oncology Executive Management Committee, UPMC Hillman Cancer Center, 2014-present
• Scientific Advisory Board, Indiana University Simon Cancer Center, Indianapolis, IN, 2014-present
• Executive Council, Global Consortium for Chinese Herbal Medicine, 2015-present
• Oncology Scientific Committee, International Association of Therapeutic Drug Monitoring and Clinical Toxicology (IATDMCT), 2015-present
• Full Member, Subcommittee F, National Cancer Institute, 2016-2020
• Chair, Scientific Advisory Board, University of Arizona Cancer Center, Tucson, AZ, 2016-present
• Member, Shared Resources Oversight Committee, UPMC Hillman Cancer Center, 2016-present
• Member, Colon Cancer Alliance, Washington DC, 2016-present
• Educational Committee, American Association for Cancer Research, 2017-2020
• Scientific Program Committee, American Association for Cancer Research, 2017-2020
• External Advisory Board, P50 GI SPORE, Vanderbilt-Ingram Cancer Center, Nashville, TN, 2017-present
• Scientific Advisory Board, University of Michigan Cancer Center, NCI Cancer Centers, Ann Arbor, MI, 2017-present
• Scientific Advisory Board, Hope Biosciences, Irvine, CA, 2017-present
• Scientific Advisory Board, Karmanos Cancer Institute, NCI Cancer Centers, Detroit, MI, 2017-present
• Scientific Advisory Board, Duke Cancer Institute, Durham, NC, 2017-present
• External Advisory Board, T32 Training Program, Northwestern University, Evanston, IL, 2018-present
• Scientific Advisory Board, University of Kentucky Markey Cancer Center, NCI Cancer Centers, Lexington, KY, 2018-present
• Member, Pharmacy and Therapeutics Committee, UPMC Hillman Cancer Center, 2019-present
• Scientific Advisory Board, St. Jude’s Cancer Center, NCI Cancer Centers, Memphis, TN, 2019-present
• Chair, Exhibits Committee, American Association for Cancer Research, 2019-present

Professional Affiliations and Society Memberships
• Fellow, American College of Physicians, 1985-present
• Member, American Federation for Medical Research, 1985-present
• Member, American Association for Cancer Research, 1985-present
• Member, International Colorectal Cancer Club, 1995-present
• Member, American Society of Clinical Oncology, 1990-present
• Member, European Society for Medical Oncology, 2000-present
• Fellow, American Association for the Advancement of Science, 2005-present

Editorships
• Reviewer, Multiple journals, 1987-present
• Editorial Board, *International Journal of Oncology*, 1997-present
• Founding Editor-in-Chief, *Clinical Colorectal Cancer*, 2000-present
• Editorial Board, *Oncology Special Edition*, 2003-present
• Editorial Board, *Current Reviews in Hematology and Oncology*, 2004-present
• Editorial Board, *Journal of Chemotherapy*, 2004-present
• Editorial Board, *Oncology*, 2006-present
• Scientific Advisory Board, *Principles and Practice of Oncology: The Cancer Journal*, 2006-present
• Editorial Board, *Oncology News International*, 2006-present
• Co-Editor-in-Chief, *Oncology Research*, 2008-present
• Editorial Board, *Clinical Oncology News*, 2008-present
• Editorial Board, *Journal of Clinical Oncology*, 2008-present
• Editorial Board, *Journal of Experimental and Clinical Medicine*, 2009-present

Major Lectureships and Seminars
• Program Chair and Lecturer, UPCI ASCO Review, Pittsburgh, PA, 2017-2019
• Lecturer, George Washington University, Medical Oncology Board Review Course, Alexandria, VA, August 2019
• Lecturer, Stanford Cancer Institute, TOPS Annual Symposium, Palo Alto, CA, October 2019
• Lecturer, Xiangya Cancer Center, 2019 Xiangya Medicine Forum: Symposium on Cancer Genomics and Immunology, Changsha, Hunan, China, October 2019

Honors and Awards
• Recipient, Castle Connolly America’s Top Doctor for Cancer Award, 2005-present
• Distinguished Professor, Xiangya Hospital, Central South University, Changsha, China, 2019-present

Leonard J. Appleman, MD, PhD
Dr. Appleman’s current research efforts in the field of tumor immunology include collaborating with Dr. Pawel Kalinski on conducting clinical trial of an autologous dendritic cell vaccine in patients with biochemical recurrence of prostate cancer (UPCI 06-070). Dr. Appleman is also working with Dr. Michael Lotze on another investigator-initiated phase I study of high dose interleukin-2 plus hydroxychloroquine (UPCI 11-080), and he has co-authored a review on inhibiting autophagy in renal cell carcinoma with his collaborators (Lotze, Maranchie, and Appleman 2013, Cancer J.). He is site Principal Investigator for the NCI-funded Cancer Immunotherapy Trials Network (CITN) study of interleukin-7 and sipuleucel-T for men with castration-refractory prostate cancer and was the site P.I. for the Cytokine Working Group IL-2 Select study (McDermott et al. 2014, Clin. Cancer Res.). Dr. Appleman also serves as site PI for several industry-sponsored studies that are investigating cancer immunotherapy. One of these studies was presented at ASCO in 2014 (Choueiri et al.).

Advisory Committee Memberships and Leadership Positions
• Co-Leader, Bladder Cancer Pathway, Via Oncology, 2012-present
• Chair, Protocol Review Board, Committee B, UPMC Hillman Cancer Center, 2013-present
• Member, Testicular Cancer Pathway, Via Oncology, 2013-present
• Co-Leader, GU Disease Team, Pennsylvania Cancer Consortium, 2015-present
• Member, Renal Cancer Task Force, National Cancer Institute, 2016-present

Professional Affiliations and Society Memberships
• Member, American Society of Clinical Oncology, 2007-present
• Member, Society for the Immunotherapy of Cancer, 2016-present

Editorships
• Reviewer, Multiple journals, 2004-present
• Associate Editor, Clinical Genitourinary Oncology, 2016-present

Major Lectureships and Seminars
• Invited Speaker, University of Pennsylvania, Kidney Cancer Symposium, October 2019

Nathan Bahary, MD, PhD
Dr. Bahary's principal research interest is to combine the power and insight of vertebrate development to elucidate basic molecular processes and the treatment of cancer. One of the methods used to characterize the discrete steps involved in normal vertebrate development and initiation and progression of tumors is the generation of mutants and alteration of specific gene expression. In this regard, the zebrafish (Danio rerio) is an especially robust vertebrate system for isolating and defining the novel factors affecting these processes. The developing embryos are transparent, facilitating visualization, and have functioning organ systems by 24 hours post-fertilization. Transgenic zebrafish, made by fusing the promoter elements of genes with a fluorescent marker (GFP), are being used to help elucidate the key steps in cancer development. This work will help provide the basis for designing rational, molecularly based disease directed therapies.

Study Sections
• Standing Member, Special Emphasis Review Panel, Postdoctoral Fellowship applications for Digestive Diseases and Nutrition, NIDDK, 2011-present

Advisory Committee Memberships/Leadership Position
• Faculty Interviewer, BMG Graduate School, University of Pittsburgh School of Medicine, 2003-present
• Faculty Interviewer, Medical Residency Program, University of Pittsburgh School of Medicine, 2003-present
• Faculty Interviewer, Medical School Admissions Committee, University of Pittsburgh School of Medicine, 2003-present
• Member, GI Steering Committee, Eastern Cooperative Oncology Group, 2004-present
• Director, GI Tumor Board, UPMC Hillman Cancer Center, 2007-present
• Member, BMG Student Review Committee, University of Pittsburgh School of Medicine, 2007-present
• Member, Fellowship Curriculum Committee, UPMC Hillman Cancer Center, 2011-present
• Rotation Site Director, Complex General Surgical Oncology Fellowship, UPMC Hillman Cancer Center, 2013-present
• Member, Pancreatic Task Force, National Cancer Institute, 2017-present
• Course Director, 2019 PancreasFest, 7/1/2019

Professional Affiliations and Society Memberships
• Member, American Society of Clinical Oncology, 2015-present
• Member, Society for Clinical and Translational Science, 2015-present
• Member, American Association for Cancer Research, 2015-present
• Member, North American Neuroendocrine Tumor Society, 2015-present
• Member, National Surgical Adjuvant Breast and Bowel Project, 2015-present
• Member, Pancreatic Cancer Research Team, 2015-present
• Member, Eastern Cooperative Oncology group (ECOG), 2015-present
• Member, Liver Center-Interest Group: Liver Tumorigenesis, University of Pittsburgh, 2019-present

Editorships
• Editorial Advisory Board, Oncology Research, 2015-present
Riyue Bao, PhD
Dr. Bao develops machine learning frameworks integrating multi-dimensional genomics, proteomics, metabolomics, and microbiome data for the discovery of novel drug targets, in combination with mining biological patterns from large databases to provide guidance on the drug discovery process, through investigating front line patients’ clinical response and their genomics/metabolism/microbe signatures with a strong focus on immunotherapy.

Study Sections
• Reviewer, Pilot Grant Study Section, UPMC Hillman Cancer Center, June 2020

Professional Affiliations and Society Memberships
• Member, Society for Immunotherapy of Cancer, 2016-present
• Member, International Society for Computational Biology, 2020-present
• Member, The American Association of Immunologists, 2020-present

Editorships
• Reviewer, The American Medical Informatics Association, 2016-present
• Reviewer, Multiple journals (Journal for ImmunoTherapy of Cancer, Clinical Cancer Research, Oncology Research), 2019-present

Honors and Awards
• Recipient, Hillman Senior Faculty Fellow for Innovative Cancer Research, UPMC Hillman Cancer Center, 2020

Franklin A. Bontempo, MD
Dr. Bontempo is a hematologist and attending physician at several UPMC facilities, providing on-call services for hospital consultations and also seeing patients at the Hillman Cancer Center. Additionally, he serves as the Medical Director of the coagulation laboratory at The Institute For Transfusion Medicine, the Associate Director of the Hemophilia Center of Western Pennsylvania, and on the advisory board of the Hemostasis and Vascular Biology Institute. In these roles, he sees patients for consultation of coagulation issues at the outpatient clinic of The Institute for Transfusion Medicine, provides coagulation interpretations of blood samples that are processed through the coagulation laboratory from across the tri-state region in assisting other physicians with test result interpretations, diagnoses, and treatment plans. He specializes in the treatment of myeloproliferative disease, a bone marrow disorder that can evolve into leukemia. A prominent speaker in local, regional, and national forums, Dr. Bontempo is an educator and mentor to the many medical students, residents, and fellows that participate in the Coagulation Rotation which has become a standard course offering of the School of Medicine at the University of Pittsburgh.

Advisory Committee Memberships and Leadership Positions
• Director, Coagulation Rotation, University of Pittsburgh School of Medicine, 1985-present
• Director, Cascade Pittsburgh Coagulation Seminar, 2009-present

Professional Affiliations and Society Memberships
• Member, American Society of Hematology, 1990-present
• Member, International Liver Transplant Society, 2014-present
• Faculty Member, Alpha Omega Alpha Honor Medical Society, 2014-present

Editorships
• Reviewer, Multiple journals, 2018-present
**Major Lectureships and Seminars**

- Presenter, Grand Rounds, UPMC Mercy, Pittsburgh, PA, 2019
- Presenter, Grand Rounds, UPMC Shadyside, Pittsburgh, PA, 2019
- Presenter, UPMC Passavant Conference, Pittsburgh, PA, 2019

**Michael Boyiadzis, MD, MHSc**

Dr. Boyiadzis's research focuses on natural killer-cell biology, immunotherapy, and hematopoietic stem cell transplantation.

**Study Sections**

- Scientific Reviewer, Experimental Transplantation - GVHD and GVL, American Society of Hematology, 48th Annual Meeting, Orlando, FL, December 2019
- Study Co-Chair, Chronic Graft-Versus-Host Disease Relapse and Risk Factor Analyses, Center for International Blood and Marrow Transplant Research (CIBMTR), 2006-present
- Chair, Immunotherapy Guidelines for Acute Leukemia, Society for Immunotherapy of Cancer, 2014-present

**Professional Affiliations and Society Memberships**

- Member, American Society of Clinical Oncology, 2001-present
- Member, American Society of Hematology, 2002-present
- Member, American College of Physicians, 2003-present
- Member, Society for Immunotherapy of Cancer (SITC), 2018-present
- Editorships
  - Ad hoc reviewer, Multiple journals, 2006-present
  - Editorial Board, *Oncology Research*, 2015-present

**Adam M. Brufsky, MD, PhD**


**Study Sections**

- Leader, Experimental Therapeutics 2 Study Section, Department of Defense Congressionally Mandated Breast Cancer Research Program, 2009-present
- Leader, Postdoctoral Fellowship Study Section, Susan G. Komen, 2010-present

**Advisory Committee Memberships and Leadership Positions**

- Member, Breast Committee, National Surgical Adjuvant Breast and Bowel Project, 2006-present
- Co-Chair and Moderator, Chemotherapy Foundation, 37th Annual Chemotherapy Foundation Symposium, New York, NY, 2019
- Moderator, Physicians' Education Resources (PER), 37th Annual Miami Breast Cancer Conference, Miami, FL, 2020

**Editorships**

- Reviewer, Multiple journals, 1998-present
- Editorial Board, *Journal of Clinical Oncology*, 2010-present
- Editorial Board, *Journal of Bone Oncology*, 2012-present

**Major Lectureships and Seminars**

- Invited Lecturer, Trinity Medical Center, Trinity Medical Center Tumor Board, Trinity, FL, August 2019
- Invited Lecturer, Mayo Clinic Jacksonville, Mayo Clinic Oncology Rounds, Jacksonville, FL, August 2019
Ronald J. Buckanovich, MD, PhD
Dr. Buckanovich's research interests are ovarian cancer stem cells, mesenchymal stem cells, tumor vascular niche, ovarian cancer therapeutics, and ovarian cancer clinical trials.

**Study Sections**
- Standing member, NIH/NCI Tumor microenvironment study section, 2019-2025

**Advisory Committee Memberships and Leadership Positions**
- Member, Scientific Advisory Committee, Ovarian Cancer Research Fund, 2013-present
- Member, Research Executive Advisory Committee, UPMC Hillman Cancer Center, 2017-present
- Member, Scientific Advisory Committee, Immune Transplant and Therapy Center (ITTC), UPMC, 2017-present
- Chair, Education Funds Committee, Womens Cancer Research Center, 2018-present
- Chair, Womens Cancer Research and Education Funds Committee, Magee-Womens Research Institute (MWRI), 2018-present
- Co-Director, Cancer Biology Program, Magee-Womens Research Institute (MWRI), 2018-present
- Member, Education Committee, UPMC Hillman Cancer Center, 2018-present
- Member, Translational and Clinical Research Subcommittee, UPMC Hillman Cancer Center, 2018-present
- Member, Internal Advisory Committee, Basic and Translational Reproductive Health Training Program, Magee-Womens Research Institute (MWRI), 2019-present
- Member, GETV Core Review Committee, Magee-Womens Research Institute (MWRI), 2020-present
- Member, Internal Advisory Board, UPMC Hillman Cancer Center SPORE Head and Neck, 2020-present

**Professional Affiliations and Society Memberships**
- Member, American Society of Clinical Investigation, 2012-present
- Member, Department of Defense Ovarian Cancer Academy, 2013-present

**Editorships**
- Reviewer, Multiple journals (Cancer Biology and Therapy, Cancer Research, Clinical Cancer Research, Gynecologic Oncology, Journal of Clinical Oncology, Journal of Laboratory Investigation, Cancer Epidemiology and Biomarkers, Translational Research Medicine, Cell Cycle, Journal of Clinical Investigation, Journal of Experimental Medicine, JAMA-Onc),
Melissa A. Burgess, MD

Dr. Burgess is a clinical and translational investigator in sarcoma with active involvement in current clinical trials. Her research efforts include a collaboration with Dr. Lisa Butterfield, former director of the Immune Monitoring and Cellular Products Laboratory (IMCPL) at the University of Pittsburgh Cancer Institute (UPCI), and a focus on analyzing peripheral blood samples from SARC 028: A Phase II Study of the Anti-PD1 Antibody Pembrolizumab (MK-3475) in Patients with Advanced Sarcomas. Planned analyses include the assessment of T-cell populations and other immune markers in the circulation with correlation to tumor response to pembrolizumab. Results will be combined with the other correlative studies from SARC 028, including correlation of response with PD-L1 status and immune monitoring within the tumor. These transitional studies should offer unique insights into the biology of PD-1 blockade in sarcoma. Dr. Burgess serves as local Principal Investigator for SARC 028, a clinical trial through Sarcoma Alliance for Research through Collaboration (SARC), of which the University of Pittsburgh is a participating institution. Results of soluble checkpoints and cytokines and other serum inflammatory markers were presented as a poster at ASCO-SITC in February 2017. Updated efficacy results and tumor PD-L1 analyses were presented at the ASCO Annual Meeting in June 2017 by Dr. Burgess during the Sarcoma Oral Abstract Session. Efficacy results and biomarker analyses were submitted for publication to *Lancet Oncology* in May 2017 with Dr. Burgess as the second author.

Advisory Committee Memberships and Leadership Positions

- Member, Protocol Review Committee B, UPMC Hillman Cancer Center, 2014-present
- Member, Fellowship Clinical Competency and Program Evaluation Committees, University of Pittsburgh Hematology-Oncology Fellowship, 2015-present
- Member, Fundraising Committee, Pittsburgh Cure Sarcoma, 2015-present
- Member and Co-Founder, Pittsburgh Sarcoma Alliance for Research through Collaboration, 2017-present
- Member, Quality and Safety Committee, UPMC, 2018-present
- Member, Hospital Readmissions Committee, UPMC, 2019-present

Professional Affiliations and Society Memberships

- Member, Sarcoma Alliance for Research through Collaboration, 2015-present
- Member, Connective Tissue Oncology Society, 2015-present
- Member, American Society of Clinical Oncology, 2015-present
- Member, American Association for Cancer Research (AACR), 2017-present
- Member, National Leiomyosarcoma Foundation, 2017-present
- Member, Epithelioid Hemangioendothelioma Foundation, 2017-present
- Member, Pittsburgh Cure Sarcoma, 2019-present

Editorships

- Reviewer, Multiple journals, 2016-present
Major Lectureships and Seminars

• Invited Lecturer, Pittsburgh Sarcoma Alliance for Research through Collaboration (PSaRC) Symposium, Pittsburgh, PA, September 2019

Timothy F. Burns, MD, PhD

Dr. Burns's research interests include the development of targeted therapies for KRAS-mutant NSCLC as well as novel strategies to overcome resistance to targeted therapies for EGFR-mutant and MET-altered NSCLC. The first line of research in his laboratory is the role of the epithelial-mesenchymal transition transcription factor TWIST1 in oncogene-driven NSCLC. They have demonstrated that TWIST1 is essential for lung tumorigenesis for KRAS-mutant, EGFR-mutant and MET-mutant, and that amplified NSCLC and TWIST1 overexpression leads to resistance to EGFR- and MET-targeted therapies. They are examining the mechanism(s) through which this occurs and developing therapeutic combinations to overcome this resistance. Dr. Burns's lab is also exploring whether targeting the HGF-MET-TWIST1 pathway can be an effective strategy for preventing or treating lung brain metastases. Importantly, researchers have developed a novel TWIST1 inhibitor that serves as a tool compound for their therapeutic studies and serves as the basis for the current drug screening efforts in order to develop a clinical TWIST1 inhibitor. His lab's second line of research is the study of mechanisms of resistance to the Hsp90 inhibitor, ganetespib, in KRAS-mutant NSCLC and to use this data to develop a rationally designed Hsp90 inhibitor combination for the clinic that can prevent or overcome resistance. They have recently demonstrated that the ERK-p90RSK-CDC25C pathway plays a key role in resistance to Hsp90 inhibitors through bypass of a G2/M checkpoint. They have found several Hsp90 inhibitor drug combinations that may be effective in KRAS-mutant NSCLC, and that they hope to test in early phase trials soon. Finally, they are actively engaged in exploring the role of ERK inhibitor combinations in targeting KRAS- and EGFR-mutant NSCLCs both in the de novo and acquired-resistance setting.

Study Sections

• Reviewer and Study Section Member, CMRF, 2014-present
• Reviewer and Study Section Member, American Lung Association, 2015-present
• Reviewer, British Lung Foundation, 2016-present
• Reviewer and Study Section Member, LUNGevity Foundation, 2016-present
• Reviewer and Study Section Member, Genomic Applications Partnership Program, GenomeCanada, 2016-present
• Ad hoc Reviewer, MRC New Investigator Research Grant, 2017-present
• Reviewer and Study Section Member, Tumor Progression and Metastasis Section, National Cancer Institute, 2018-present
• Reviewer and Study Section Member, Clinical and Translational R21 and OMNIBUS R03, National Cancer Institute, 2020-present
• Reviewer and Study Section Member, Physician Scientist Fellowship Competition, Doris Duke Charitable Foundation, 2020-present
• Reviewer, Wellcome Trust, DBT India Alliance, 2020

Advisory Committee Memberships/Leadership Position

• Advisory Board Member, Blueprint Medicines, November 2019
• Member, Hematology/Oncology Fellowship Curriculum Committee, UPMC Hillman Cancer Center, 2012-present
• Member, Protocol Review Committee, UPMC, 2016-present
• Associate Program Director for Research, Hematology/Oncology Fellowship Program, UPMC Hillman Cancer Center, 2019-present

Professional Affiliations and Society Memberships

• Member, American Medical Association, 1998-present
• Member, American Association for Cancer Research, 1998-present
• Member, American Association of Clinical Oncology, 2008-present
• Member, International Association for the Study of Lung Cancer, 2010-present
• Member, Eastern Cooperative Oncology Group, 2012-present
• Member, Alliance for Clinical Trials in Oncology, 2013-present

Editorships
• Reviewer, Multiple journals, 2013-present
• Associate Editor, Cancer Biology & Therapy, 2015-present
• Breaking Insights Editor, Cancer Research, 2017-present
• Associate Editor, Cancer Molecular Targets and Therapeutics Section, Frontiers in Oncology, 2019-present
• Editorial Board, Clinical Lung Cancer, 2020-present

Major Lectureships and Seminars
• Speaker, OncLive, State of the Science Summit, Pittsburgh, PA, September 2019
• Discussant, ASCO Clinical Science Symposium, ASCO Annual Meeting, Virtual, May 2020

Honors and Awards
• Recipient, Next Gen Innovators, HemOnc Today, 2019

Lan G. Coffman, MD, PhD
Dr. Coffman's research focuses on understanding and targeting the cancer supporting stromal tissues that are critical to the survival, growth, and spread of ovarian cancer. Specifically, Dr. Coffman's lab studies a critical non-malignant component of the ovarian cancer microenvironment, the carcinoma-associated mesenchymal stem cell (CA-MSC). CA-MSCs are stromal progenitor cells, which significantly increase cancer growth, enrich the cancer stem cell pool and increase chemotherapy resistance.

The lab studies how CA-MSCs are formed and develop tumor supporting properties. The lab also focuses on identifying important tumor cell:CA-MSC interactions which mediate CA-MSC's pro-tumorigenic functions and have potential for translation into new therapeutic targets. Additionally, the lab studies how CA-MSCs impact the development of ovarian cancer metastasis and the metastatic microenvironment.

The ultimate goal of this research is to translate novel laboratory findings into powerful therapeutic approaches for the prevention and treatment of ovarian cancer.

Study Sections
• Ad hoc reviewer, Ovarian Cancer Research Program, DOD CDMRP Peer Review Committee, September 2019
• Member, YIA, American Society of Clinical Oncology, February 2020
• Ad hoc reviewer, SBIR-STTR, National Institutes of Health, March 2020
• Ad hoc reviewer, NCI-J, National Institutes of Health, June 2020

Honors and Awards
• Recipient, Allen Humphrey Excellence in Mentoring Award, UPMC Hillman Cancer Center, 2019-2020
• Recipient, Hillman Fellow for Innovative Developmental Cancer Research, UPMC Hillman Cancer Center, 2019-2020
• Recipient, Junior Scholar Award in Basic Cancer Research, UPMC Hillman Cancer Center, 2019-2020

Diwakar Davar, MD
Dr. Davar's initial work evaluated survival among patients with stage IV melanoma in various countries. It was noted that despite similar access to treatment, overall survival in stage IV patients differed by country. These results, presented at Perspectives in Melanoma XV, provided the first hint that melanoma biology differed by geography. Other authors have since demonstrated that this is secondary to geographic variations in molecular epidemiology (BRAF, NRAS, CKIT mutational inci-
ience). A retrospective single-institution analysis of melanoma patients treated with HD IL-2 was subsequently performed. This experience was initially presented at ASCO 2013 and suggested that administration of HD IL-2 in a non-ICU setting without pressor and/or ventilator support to maximize dose intensity did not compromise outcomes. Updated analyses with 1-/2-/3- year survival data and mutational information have been published. Another area of research has been in translational cancer immunotherapy and early-phase clinical trials. He is working with Drs. Zarour and Kirkwood to coordinate the clinical care and translational research of a novel trial combining PD-1 inhibitor Pembrolizumab with immunomodulatory PEG-IFN. Preliminary results were presented at ASCO 2015. Final results have been collated along with correlative analyses and are pending publication. More recently, in collaboration with Bristol-Myers Squibb and based on published findings by Dr. Zarour’s laboratory, Dr. Davar contributed to the development and implementation of a first-in-human study of TIGIT mAb (BMS-986207) singly and in combination with Nivolumab that is presently in active accrual and for which he is the institutional Principle Investigator. He is also the institutional Principle Investigator for first-in-human studies of GITR mAb (TRX-518), pegylated arginase (AEB1102), and IDO inhibitor (BMS-986205). Based on emerging data implicating intestinal dysbiosis in mediating non-response to PD-1 blockade, Dr. Davar developed, collaboratively with Dr. Zarour, a protocol evaluating fecal microbiota transplant in combination with PD-1 blockade to treat PD-1 non-responders. This first-in-human study was selected for funding by Merck to support the clinical costs and is IRB approved. In the context of this trial, Dr. Davar is working in close collaboration with Dr. Zarour and co-investigators Drs. Methé and Benos, for the performance of the correlative studies in the context of the new clinical trial with fecal transplant microbiota and pembrolizumab in PD-1 refractory melanoma patients.

Study Sections
- Abstract Reviewer, Society for Immunotherapy of Cancer, 2019
- Member, Study Section, UPMC, Department of Medicine Research Day, Pittsburgh, PA, 2019

Advisory Committee Memberships and Leadership Positions
- Member, Protocol Review Committee B, UPMC Hillman Cancer Center, 2014-present
- Member, Scientific Advisory Board, Vedanta Biosciences, 2019-2020
- Member, Scientific Advisory Board, Checkmate Pharmaceuticals, 2019-2020
- Member, Scientific Advisory Board, Shionogi, 2019-2020

Professional Affiliations and Society Memberships
- Member, Pennsylvania Medical Society, 2009-present
- Member, American Society of Clinical Oncology, 2011-present
- Member, Allegheny County Medical Society, 2011-present
- Member, American Association for Cancer Research, 2014-present

Editorships
- Editorial Board, Clinical GU Oncology, 2014-present
- Editorial Board, Cancer Medicine, 2015-present
- Editorial Board, Case Reports in Internal Medicine, 2015-present
- Editorial Board, Journal for ImmunoTherapy of Cancer, 2016-present
- Editorial Board, Cancer, 2018-present
- Editorial Board, Journal of Clinical Oncology, 2018-present

Major Lectureships and Seminars
- Invited Speaker, Microbiome Movement Oncology Response Summit, July 2019
- Invited Speaker, Best of ASCO Review, UPMC Hillman Cancer Center, September 2019
- Invited Speaker, UPMC Symposium on Cancer Genomics and Immunology, UPMC Hillman Cancer Center, October 2019
- Invited Speaker, Mini-Symposium on Precision Oncology, UPMC Hillman Cancer Center, October 2019
• Invited Speaker, Microbiome Connect, Skin and Human Virtual Conference, June 2020

Honors and Awards
• Recipient, 2020 Top Physicians Under 40 Award, Pennsylvania Medical Society, April 2020

Laura M. De Castro, MD, MHSc
Dr. De Castro’s research interests include sickle cell-related psychosocial issues, pulmonary hypertension, drug development, and pregnancy and obstetric outcomes. She has developed research hypotheses, designed studies, and applied for extramural support as well as managed data collection and research-related clinical trials. Dr. De Castro has also implemented the planning and development of phase II and III and translational research clinical trials.

Study Sections
• Ad hoc grant reviewer, American Society of Hematology, 2012-present
• Ad hoc grant reviewer, National Heart, Lung, and Blood Institute (NHLBI), 2012-present
• Ad hoc grant reviewer, Agency for Healthcare Research and Quality (AHRQ), 2012-present
• Ad hoc grant reviewer, FDA Office of Orphan Products Development, 2012-present

Advisory Committee Memberships and Leadership Positions
• Career Mentor, American Society of Hematology Minority Medical Student Award Program, 2008-present
• Member, Advocacy Leadership Program, American Society of Hematology, 2010-present
• Member, Executive Committee, Study to Compare bone Marrow Transplantation to Standard Care in Adolescents and Young Adults with Severe Sickle Cell Disease, 2012-present
• Clinical Chief, Benign Hematology Program, University of Pittsburgh Medical Center, 2014-present
• Co-Director, Sickle Cell Disease Module, University of Pittsburgh, 2014-present
• Member, Clinical Competency Evaluation and Selection Committee, UPMC Hematology/Oncology Fellowship Program, 2014-present
• Member, Diversity and Inclusion Committee, Department of Medicine, University of Pittsburgh, 2015-present
• Member, Committee on Practice, ASH, 2016-present
• ASH Liaison/Representative, Society of Hospital Medicine Society, 2017-present
• Member, Committee for Excellence in Cancer Education and Training, UPMC Hillman Cancer Center, 2017-present
• Member, Recruitment and Retention Subcommittee, ASH, 2017-present
• Member, SCD Health Care Professional Education and Training (HPET) workgroup, ASH, 2017-present
• Member, Sickle Cell Disease Executive and Incubator Committees, Vascular Medicine Institute, 2017-present
• Member, Sickle Cell Guidelines Development Committee, ASH, 2017-present
• Votin Member, Data and Safety Monitor Board, The Sickle Cell Trevor Thompson Transition Project, 2018-present
• Consultant, Pfizer, 2019-2020
• Consultant, Novartis, 2019-2020
• Consultant, Global Blood Therapeutics, 2019-2020

Professional Affiliations and Society Memberships
• Member, American Society of Hematology, 1996-present
• Founding Member, Sickle Cell Adult Provider Network (SCAPN), 2004-present
• Inaugural Member, ASH Ambassador Program, 2017-present
• Member, European Hematology Association, 2017-present
Albert D. Donnenberg, PhD

Dr. Donnenberg’s research interests focus on cancer stem cells and their role in tumorigenesis, invasiveness, and metastasis. He views stemness in epithelial cancers as a state rather than the property of a unique cell type, with individual tumor cells transiting in and out of the cancer stem cell state. According to this interpretation, the more aggressive the tumor, the more cells exist in the stem-like state at any given time. In xenograft models, tumorigenicity is dependent on this state, which can be recognized by the expression of a number of markers that are associated with normal mesenchymal stem cells. In epithelial cancers, mesenchymal markers are associated with invasion, immune suppression and drug resistance. Taken together, the cancer stem cell paradigm has converged with the bidirectional epithelial to mesenchymal/mesenchymal to epithelial transitions (EMT/MET). The Donnenbergs’s working hypothesis is that neoplastic transformation and conferral of invasiveness are often independent processes, the later on wound-healing signals present in the tumor microenvironment. Thus, a carcinoma in situ and an invasive carcinoma may share a common mutational profile but exist in very different microenvironments. Since the environment is controlled to a large part by tissue macrophages and stromal cells, which interact at close distances with tumor cells, their research efforts are currently aimed at understanding how polarization toward wound healing influences tumor cell behavior, and how tumor cells influence polarization.
Kathleen Dorritie, MD

Dr. Dorritie’s research centers on the development of early phase clinical trials in hematologic malignancies, in particular lymphoid malignancies. Previously, she had conducted laboratory research focused on the development of novel therapeutic agents for acute myeloid leukemia. A member of the HCC Cancer Therapeutics Team, she has played a key role in the development of the chimeric antigen receptor (CAR) T-cell program and serves as lead or co-investigator on several clinical studies of CAR T-cell therapy at UPMC. Dr. Dorritie has also been playing a key role in the development of a stem cell transplant program for patients with hemoglobinopathies, including sickle cell disease. Dr. Dorritie teaches a number of didactic lectures for both medical students and fellows and serves as a block director for the MS2 Hematology course. And, she teaches clinically on the leukemia, stem cell transplant, and malignant hematology services.

Professor Affiliations and Society Memberships
• Member, American Society of Hematology, 2011-present
• Member, American Society of Clinical Oncology, 2011-present
• Member, American Association for Cancer Research, 2011-present
• Member, American Society for Blood and Marrow Transplantation, 2012-present

Editorships
• Reviewer, Multiple journals, 2015-present

Major Lectureships and Seminars
• Lecturer, UPMC Shadyside, Medicine Grand Rounds, October 2019
• Lecturer, Leukemia & Lymphoma Society, Pennsylvania Blood Cancer Conference, November 2019
• Lecturer, Arnold Palmer Cancer Center, Journal Club, December 2019

Jan Drappatz, MD

Dr. Drappatz’s primary areas of research involve the development of novel agents for the treatment of glioblastoma, central nervous system lymphoma, and other primary and metastatic brain tumors. He has served as the principal investigator of numerous clinical trials to identify effective therapies for patients with brain tumors and other neurological ailments associated with cancer. He is currently leading several clinical trials involving immune therapy and new targeted therapies as well as treatments targeting tumor vasculature. His work has been presented nationally and internationally and has resulted in well over 150 manuscripts, book chapters, and abstracts. He serves as a peer reviewer for multiple journals.

Study Section
• Abstract Reviewer, Organizing Committee, Society of Neuro-Oncology Meeting, New Orleans, LA, 2017-present
• Co-Chair, Neuro-Oncology Section, American Neurological Association, 2019 ANA Annual Meeting, St. Louis, MO, 2019

Advisory Committee Memberships and Leadership Positions
• Neuro-Oncology Committee, Alliance for Clinical Trials in Oncology, 2012-present
• Director, Neuro-Oncology Fellowship Program, UPMC, 2017-present
• Director, Neuro-Oncology, Via Oncology / Elsevier Pathways, 2019-present
• Advisory Board, Agios, 2020-present

Professional Affiliations and Society Memberships
• Member, Society for Neuro-Oncology, 2005-present

Editorships
• Reviewer, Multiple journals (Journal of Neuro-Oncology, Neuro-Oncology, Expert Review of Anti-Cancer Therapy, Frontiers Oncology, Cancer Chemotherapy and Pharmacology, Frontiers Neurology), 2007-present

Honors and Awards
• Honoree, Best Doctors, Pittsburgh Magazine, 2009-present
• Recipient, Top Doctors, Castle Connolly, 2012-present

Leisha A. Emens, MD
Dr. Emens was recruited to the UPMC Hillman Cancer Center as Director of Translational Immunotherapy for the Women's Cancer Research Center at Magee Women's Hospital, and as Co-Leader of the Cancer Immunology and Immunotherapy Research Program. In these leadership roles, she will promote interdisciplinary translational and clinical cancer immunotherapy research and oversee the strategic expansion, integration, and operations of early phase immunotherapy trials at HCC and Magee Women's Hospital. Dr. Emens will work with investigators in the HCC research programs, including Cancer Therapeutics, Cancer Immunology and Immunotherapy, Cancer Biology, Genome Instability, and Cancer Epidemiology and Prevention to develop novel clinical and translational immune-based investigations for the detection, screening, prevention, and treatment of breast and gynecologic cancers. She will work closely with members of the Breast Disease Team to develop strong multi- and inter-disciplinary treatment approaches to breast cancer care. She will be co-PI of the UPMC Hillman Cancer Center Breast SPORE, planned for submission in the next 12 months. She will also participate in other team science grants in the Women's Cancer Research Center and the Cancer Immunology and Immunotherapy Program. She will actively participate as a member of the NSABP Foundation, and will serve as UPMC Hillman PI for the Translational Breast Cancer Research Consortium (TBCRC), both of which are clinical translational research groups that test innovative, scientifically-driven therapeutic strategies with deeply rooted biomarker studies through cross-institutional collaborations. She will also work with the Breast and Gynecologic Disease Teams to develop investigator-initiated trials that collaboratively evaluate novel therapies that target common elements of disease biology in women's cancers.

Study Sections
• Judge, President's Award, Society for Immunotherapy of Cancer, 2018-present
• Member, Young Investigator's Award Review Committee, Society for Immunotherapy of Cancer, 2018-present
• Review Committee, Basic Cancer Research Grants, American Association for Cancer Research, 2018-present
• Selection Committee, Outstanding Investigator Award for Breast Cancer Research, American Association for Cancer Research, 2018-present
• Selection Committee, Outstanding Investigator Award for Breast Cancer Research, American Association for Cancer Research, 2018-present
• Co-Chair, Organizing Committee, Society for Immunotherapy of Cancer Winter School for Cancer Immunotherapy, 2018-present
• Co-Chair, Publications Committee, Society for Immunotherapy of Cancer, 2018-present
• Education and Training Committee, Society for Immunotherapy of Cancer, 2018-present
• Abstract Review Committee, Society for Immunotherapy of Cancer (SITC), 2019-present
• Exceptional Project Grant Review Committee, Breast Cancer Alliance, 2019-present
• Reviewer, Pilot Grants, UPMC Hillman Cancer Center, 2019-present

Advisory Committee Memberships and Leadership Positions
• Organizing Committee, Translational Research Cancer Centers Consortium (TRCCC), March 2020
• Scientific Advisory Board, Molecuvax, 2016-present
• TiMIOS Scientific Advisory Board, Society for Immunotherapy of Cancer, 2017-2019
• Selection Committee, Presidential YIA Award, Presidential Session, Society for Immunotherapy of Cancer (SITC), National Harbor, MD, 2017-2019
• External Advisory Board, Vanderbilt-Ingram Cancer Center Breast SPORE, 2017-present
• Margetuxmab Advisory Council, Macrogenics, 2017-present
• Scientific Advisory Board, eTHeRNA, 2017-present
• Scientific Advisory Board, Bayer Pharmaceuticals, 2017-present
• Scientific Advisory Board, Replimune, 2017-present
• Co-Chair, Strategic Vision Committee in Cancer Immunotherapy, UPMC Hillman Cancer Center, 2018-present
• Co-Leader, Immunology and Immunotherapy Program, UPMC Hillman Cancer Center, 2018-present
• External Advisory Board, Fred Hutchinson Cancer Research Center Andy Hill Cancer Research, 2018-present
• External Advisory Board, Baylor College of Medicine Breast SPORE, 2018-present
• Member, Academic Incentive Plan Committee, UPMC Hillman Cancer Center, 2018-present
• Member, Executive Committee, Cancer Immunology Training Program, University of Pittsburgh, 2018-present
• Member, Research Executive Advisory Committee, UPMC Hillman Cancer Center, 2018-present
• Scientific Advisory Board, Roche, 2018-present
• Stakeholder’s Council, Society for Immunotherapy of Cancer, 2018-present
• Advisory Board, Silverback, 2019-present
• Advisory Board, Chugai, 2019-present
• Breast Cancer Working Group Committee, NRG Oncology, 2019-present
• External Advisory Board, Breast SPORE, MD Anderson Cancer Center, Houston, TX, 2019-present
• External Advisory Board, SPORE in Radiation and Immunotherapy, Weill Cornell Medical College, New York, NY, 2019-present
• Immunotherapy and Immune Modulation Committee, NRG Oncology, 2019-present
• Member, Facilities and Shared Equipment Committee, UPMC Hillman Cancer Center, 2019-present
• Nominating Committee, Translational Research Cancer Centers Consortium (TRCCC), 2019-present
• Board of Directors Vice President/President-Elect, Society for Immunotherapy of Cancer, 2020-present
• Executive Council, Society for Immunotherapy of Cancer, 2020
• Nominating Committee, Society for Immunotherapy of Cancer, 2020
• Co-Chair, Breast Cancer Immunotherapy Guidelines Committee, Society for Immunotherapy of Cancer (SITC), 2020

Professional Affiliations and Society Memberships
• Member, American College of Physicians (ACP), 1995-present
• Member, American Society for Clinical Oncology (ASCO), 1998-present
• Member, American Association for Cancer Research (AACR), 1999-present
RESEARCH

- Member, Society for the Immunotherapy of Cancer (SITC), 2001-present
- Member, Eastern Cooperative Oncology Group (ECOG), 2003-present
- Member, Federation of Clinical Immunology Societies (FOCIS), 2017-present
- Member, European Society for Medical Oncology (ESMO), 2018-present
- Member, National Adjuvant Breast and Bowel Project (NSABP), 2018-present
- Member, NRG Oncology Cooperative Group, 2019-present

Editorships
- Reviewer, Multiple journals, 2002-present
- Editorial Board, *Journal for the Immunotherapy of Cancer*, 2013-present
- Section Editor, *Clinical Trials Monitor, Journal for Immunotherapy of Cancer*, 2015-present

Major Lectureships and Seminars
- Invited Speaker, Gordon Research, Conference on Hormone-Dependent Cancers, Sunday River, ME, August 2019
- Invited Speaker, Alfred Benzon Foundation, Benzon Symposium: Targeting Breast and Ovarian Cancers, Copenhagen, Denmark, September 2019
- Invited Speaker, European Society for Medical Oncology, Metastatic Breast Cancer Session, Barcelona, Spain, September 2019
- Invited Speaker, European Society for Medical Oncology, Industry Satellite Symposium, Barcelona, Spain, September 2019
- Lecturer, Minisymposium on Precision Oncology, UPMC Hillman Cancer Center, Pittsburgh, PA, October 2019
- Invited Speaker, 21st Century C.A.R.E., 31st Annual Fall Foliage Cancer Conference, Asheville, NC, October 2019
- Invited Speaker, Society for Immunotherapy of Cancer, Annual SITC Primer on Immunotherapy, Washington, DC, November 2019
- Invited Speaker, Bridge 2019, Immunotherapy Bridge Conference, Naples, Italy, December 2019
- Invited Speaker, Japanese Physician Forum, San Antonio, TX, December 2019
- Invited Speaker, MEDSCAPE, MEDSCAPE Education Spotlight, December 2019
- Invited Speaker, PeerView Institute for Education, San Antonio, TX, December 2019
- Invited Speaker, NRG Oncology, NRG Fall Meeting Workshop, Houston, TX, January 2020
- Lecturer, San Antonio Breast Cancer Symposium Update, Pittsburgh, PA, UPMC Hillman Cancer Center, February 2020
- Session Organizer, Cancer Immunotherapy Intersections, UPMC Hillman Cancer Center, 31st Annual Scientific Retreat, 2019-present

Honors and Awards
- Hillman Scholar for Innovative Cancer Research, Hillman Cancer Center, 2019
- Hillman Scholar for Team Science, Hillman Cancer Center, 2019
- Laura Ziskin Prize in Translational Research, Stand Up to Cancer, 2020

Robert J. Ferguson, PhD
Dr. Ferguson’s research interests include the cognitive-behavioral treatment of late cognitive effects of cancer, cancer survivorship, and palliative care. He focuses on the development of cognitive-behavioral therapies for cancer-related cognitive impairment (CRCI) and designing and carrying out randomized clinical trials to evaluate treatments. Funding for this work includes grants from the National Cancer Institute, NIH Office of Research on Women’s Health, and the Lance Armstrong...
Advisory Committee Memberships and Leadership Positions

- Member, Rehab Steering Committee, UPMC Hillman Cancer Center, 2017-present
- External Advisor, K-Award for Medical Oncologists, University of Rochester, Wilmot Cancer Institute, 2018-present
- Member, International Cognition and Cancer Task Force, 2019-present
- Member, Behavioral Health Smart Technologies, University of Pittsburgh, 2019-present

Professional Affiliations and Society Memberships

- Member, American Psychological Association, 1994-present
- Member, Task Force Co-Leader, Society of Behavioral Medicine, 1994-present
- Member, American Psychosocial Oncology Society, 2016-present
- Member, Pennsylvania Psychological Association, 2016-present

Editorships

- Reviewer, Multiple journals (Psycho-Oncology, Journal of Clinical Oncology, Journal of Cancer Survivorship), 2006-present
- Book Proposal Reviewer, Oxford University Press, 2019-present

Deborah L. Galson, PhD

Dr. Galson investigates signal transduction pathways and gene regulation in osteoclasts (OCL) and osteoblasts (OB) both during normal differentiation and in pathological states. The goal is to better understand pathological changes in the bone microenvironment, particularly OCL and OB, in Paget's disease of bone and Multiple Myeloma (MM) bone disease. Her current studies focus on four main areas: (1) Determine the mechanism by which Measles virus nucleocapsid protein (MVNP) alters expression of cellular genes and increases osteoclast differentiation in Paget's disease of bone. Dr. Galson has shown that MVNP signals through interaction with the IKK family members TBK1 and optineurin to generate pagetic OCL. Additional studies aim to determine the mechanism of cooperation between MVNP and p62 (SQSTM1) with pagetic mutations (eg. p62P392L) to generate Paget's lesions. (2) Determine the mechanism by which MM cells suppress the differentiation capacity of osteoblast progenitor cells, which persists even after removal of the MM cells. These MM-altered bone marrow stromal cells also enhance osteoclastogenesis and microenvironmental support of myeloma growth. The focus is on understanding signaling mechanisms and the epigenetic changes induced in BMSC by MM cells. (3) Determine the roles of Gfi1 and EZH2 in osteoclasts. These studies derive from finding a key role for these proteins in MM-induced epigenetic changes in BMSC. (4) Determine if inhibition of TBK1/IKKe signaling is a useful therapeutic strategy to inhibit MM bone disease. Inhibition of TBK1/IKKe signaling blocks OCL formation and slows MM growth in vitro. These studies are being extended to in vivo MM models. Dr. Galson is also involved in additional studies involving other cancers that invade the bone, such as breast cancer.

Study Sections

- Permanent Member, CMRF, University of Pittsburgh, 2004-present
- Member/Abstract Reviewer, ASBMR Scientific Program Committee, 2016-present
- Ad hoc Reviewer, Blood Cancer UK, 2019
- Reviewer, SBDD, National Institutes of Health, 2020
- Reviewer, ZRG1 MOS-R(02), Conflict Special Emphasis Panel, National Institutes of Health, 2020

Advisory Committee Memberships and Leadership Positions

- Vice Chair, Subcommittee of Research Safety/Biosafety, VAPHS, 2005-present
- Member, Luminex Core Advisory Committee, UPMC Hillman Cancer Center, 2015-present
- Member, Finance Committee, ASBMR, 2016-2019
- Member, In Vivo Imaging Facility Advisory Committee, UPMC Hillman Cancer Center,
2018-present
• Member, PhD Faculty Task Force, University of Pittsburgh Department of Medicine, 2018-present
• Member, Women’s Task Force, UPMC Hillman Cancer Center, 2018-present
• Session Moderator, American Society for Bone and Mineral Research, 2019
• Member, Senior Faculty Event Planning Committee, Women in the Department of Medicine, 2019-2020

Professional Affiliations and Society Memberships
• Fellow, American Society for Bone and Mineral Research, 1996-present
• Member, American Society for Biochemistry and Molecular Biology, 1996-present
• Member, Federation of American Societies for Experimental Biology, 1996-present
• Member, American Society of Hematology, 2014-present
• Member, American Association for Cancer Research, 2015-present
• Member, Cancer and Bone Society, 2016-present

Editorships
• Reviewer, Multiple journals, 1995-present

Honors and Awards
• Recipient, Best of AACR Journals Award for most-cited research articles published in 2017, March 2019

Samit Ghosh, PhD
Dr. Ghosh’s research goal is to delineate a translational pathway and to design platforms to expedite repair and regenerative therapeutics for the treatment of pulmonary complications of sickle cell disease (SCD). He investigates the underlying mechanisms that lead to acute or chronic pulmonary complications of SCD. His research involves two major components of SCD. One is to determine the role of TLR4 signaling and vascular adhesion machinery in the development of Acute Chest Syndrome in SCD. The other component is to define Nrf2 regulated redox mechanisms that can be targeted therapeutically to prevent chronic disease progression leading to end organ damage in SCD. His research could provide a solid foundation identifying precision drugs for protection and/or attenuation of acute and chronic lung complications in SCD. In addition, his studies offer the potential of identifying the sub-group of SCD patients at higher risk of end-organ damage, who will be more suitable for high-risk experimental therapy.

James G. Herman, MD
A member of The Cancer Genome Atlas, Dr. Herman has characterized genome-wide epigenetic changes in cancer in multiple forms of cancer. Dr. Herman’s research explores changes in DNA methylation in cancer, and his lab is the first to demonstrate that tumor suppressor genes are silenced by promoter region methylation. They have characterized changes in methylation associated with the development and progression of cancer, including the demonstration of changes in DNA methylation in premalignant lesions. Current research is aimed at utilizing these findings to improve the management of patients through the development of prognostic, predictive, and early detection epigenetic biomarkers, and in studies of epigenetic therapy. They have developed new methods for study of DNA methylation (methylation specific PCR, in Situ MSP, ERMA, and, more recently, nanotechnology-based detection methods, included MS-QFRET and MOB, DREAMing). These sensitive methods have been used for the early detection of cancer and for developing predictive biomarkers.

Advisory Committee Memberships and Leadership Positions
• Co-Leader, Cancer Epidemiology & Prevention Program, University of Pittsburgh, 2018-present
• Co-Chair, Executive Committee Member, Lung Cancer Group, National Cancer Institute, Early Detection Research Network, 2019-present
**Professional Affiliations and Society Memberships**
- Member, American Association for Cancer Research, 1997-present

**Editorships**
- Editor, *Clinical Cancer Research*, 2003-present
- Ad hoc reviewer, Multiple journals, 2003-present
- Senior Editor, *Epigenomics*, 2009-present
- Editorial Board, *Cancer Prevention Research*, 2010-present
- Editor, *Cancer Research*, 2016-present

**Major Lectureships and Seminars**
- Presenter, Clinical Application of Circulating Biomarkers, 6th Annual Clinical Application of Circulating Biomarkers Conference, Washington, DC, August 2019
- Lecturer, EDRN, 11th EDRN Scientific Workshop, Bethesda, MD, September 2019
- Lecturer, OncLive, OncLive State of the Science Summit Lung Cancer, September 2019
- Lecturer, University of Hangzhou, Symposium in Molecular Pathology and Cancer Diagnosis, China, October 2019
- Lecturer, Hope College, Thompson Lecture in Translational Research, Holland, MI, November 2019

**Charles C. Horn, PhD**
Dr. Horn’s primary research is the neurobiology of vagus nerve signaling. This research uses neuro-modulation devices to control nerve-organ communication for the treatment of cancer, inflammation, gastrointestinal motility, and side effects of cancer therapies.

**Study Sections**
- Reviewer, National Institutes of Health, July 2020

**Advisory Committee Memberships and Leadership Positions**
- Chair, NIH SPARC Cross-Team Communication Committee, 2017-present
- Chair, Data Portal Committee, NIH SPARC Blue Team, 2019-present
- SPARC Database Portal Change Control Board, National Institutes of Health, 2019-2020

**Professional Affiliations and Society Memberships**
- Member, Society for Neuroscience, 1992-present
- Member, American Physiological Society, 2007-present

**Honors and Awards**
- Recipient, First Prize, NIH SPARC Hackathon, Bethesda, MD, December 2018

**Annie P. Im, MD**
Dr. Im’s research involves clinical trials in elderly AML and in GVHD, as well as late complications after stem cell transplant. She also conducts educational research on interactive learning in oncology fellowships.

**Study Sections**
- Abstract Reviewer, American Society of Hematology, 2019 ASH Annual Meeting, 2019

**Advisory Committee Memberships and Leadership Positions**
- Fundraising Member, Team in Training, Leukemia & Lymphoma Society of the Western Pennsylvania and West Virginia Chapter, 2011-present
- Member, Protocol Review Board, UPMC Hillman Cancer Center, 2011-present
- Member, Molecular Target Drug Discovery Translational Science Group, UPMC Hillman Cancer Center, 2012-present

*As Director of the Fellowship Program, Dr. Im has been working with fellows and faculty to adjust the curriculum to optimize the fellows’ experience and wellness.*
• Leukemia/BMT Core Committee, ECOG-ACRIN, 2012-present
• Program Evaluation Committee and Core Competency Committee, Hematology/Oncology Fellowship Program, UPMC Hillman Cancer Center, 2013-present
• Associate Clinical Investigator, National Cancer Institute, 2014-present
• Medical Review Team, National Bone Marrow Transplant Link, 2014-present
• Advisory Board, PA/WV Chapter of the Leukemia & Lymphoma Society, 2015-present
• GVHD Committee, Center for International Blood and Marrow Transplant Research, 2015-present
• GVHD Symposium Planning Committee, Meredith Cowden Foundation, 2015-present
• Director, Hematology/Oncology Fellowship Program, University of Pittsburgh, 2017-present
• Later Effects Working Committee, Center for International Blood and Marrow Transplant Research, 2018-present
• Chair, Faculty Development Task Force, American Society of Clinical Oncology, 2019
• Co-Chair, Protocol Steering Committee, Gravitas 309, Incyte, 2019-present
• Chair, Faculty Development Task Force, American Society of Clinical Oncology, 2019-present
• Committee on Education, American Society of Transplantation and Cellular Therapy, 2020-present
• Chair-Elect, Oncology Training Programs Committee, American Society of Clinical Oncology, 2020
• Scientific Program Committee, American Society of Clinical Oncology, ASCO Annual Meeting, 2020

Professional Affiliations and Society Memberships
• Member, American Society of Clinical Oncology, 2011-present
• Member, American Society of Hematology, 2012-present
• Member, American Society of Blood and Marrow Transplantation, 2012-present
• Member, American Association for Cancer Research, 2013-present

Editorships
• Reviewer, Multiple Journals, 2016-present

Major Lectureships and Seminars
• Lecturer, Training Program Director’s Workshop, American Society of Hematology, ASH Annual Meeting, 2019
• Lecturer, Program Director’s Section, American Society of Clinical Oncology, ASCO Annual Meeting, 2020

Sawa Ito, MD, PhD
For many, bone marrow stem cell transplantation is the only curative treatment for leukemia and lymphoma-blood cancers. This technique has shown that immune cells of the donor which are transferred in the transplant can eradicate blood cancer, a process known as the graft-versus-leukemia (GVL) effect. Dr. Ito’s research work is directed at finding ways to harness this GVL immune effect to cure leukemia and lymphoma. She is particularly interested in preventing and treating post-transplant relapse, which remains the major cause of transplant failure. This involves two approaches: The first is to improve the results of transplants for people with leukemia by increasing the GVL effect and decreasing the hazards of the transplant through biomarker-directed personalized medicine and adoptive cellular immunotherapy. The second is to find ways to create a GVL effect to boost the patient’s own immune system and thus avoid the complication of transplantation altogether.

Study Sections
• Reviewer, ASH Scholar Awards, American Society of Hematology, 2019-present
• Reviewer, Hematology Opportunities for the Next Generation of Research Scientists
(HONORS) Award, American Society of Hematology, 2019-present

- Reviewer/Interviewer, Research Training Award for Fellows (RTAF), American Society of Hematology, 2019-present
- Reviewer, CRYOSTEM Projects, CRYOSTEM, 2020

**Professional Affiliations and Society Memberships**

- Member, American Society of Hematology, 2009-present
- Member, American Society for Blood and Marrow Transplantation, 2011-present
- Member, American Society of Clinical Oncology, 2011-present
- Member, International Society for Cellular Therapy, 2012-present

**Editorships**

- Review and Editor, *Frontiers in Hematology and Oncology*, 2014-present
- Reviewer, Multiple journals (*Bone Marrow Transplantation, Blood Advances, British Journal of Haematology*), 2013-present

**Maria Kapetanaki, PhD**

Dr. Kapetanaki is a molecular biologist with a long-standing interest in the regulation of gene expression in human diseases affecting normal lung function. Her research focuses on identifying the molecular pathways underlying pulmonary hypertension, which is a common complication in the sickle cell patient population. Her current projects include the study of the regulatory mechanism of heme-induced Placenta Growth Factor (PIGF) and the role of heme-induced genes in hematopoietic cells. More specifically, she investigates the role of oxidant response pathways, especially the Nrf-2 transcription factor and its upstream regulators. She employs cell culture and murine models where she applies techniques, such as gene silencing, gene editing and drug treatment to describe the steps of heme activation.

**Gregory J. Kato, MD**

Dr. Kato’s research specialties comprise blood flow physiology studies, clinical trials, and proteomic analysis of plasma to unravel new mechanisms contributing to pulmonary hypertension and other complications of sickle cell disease. He has formulated a model to suggest that pulmonary hypertension, stroke, leg ulcers and priapism share features of vasculopathy and more severe hemolytic anemia, and that pain crisis, acute chest syndrome, and avascular necrosis share evidence of poor blood circulation due to viscosity. These two groups overlap and are not completely distinct.

**Advisory Committee Memberships and Leadership Positions**

- Member, Steering Committee, Evaluation of Purified Poloxamer 188 in Vaso-Occlusive Crisis of Sickle Cell Disease (EPIC), 2014-present
- Medical Director, Children's Sickle Cell Foundation, Pittsburgh, PA, 2014-present
- Consultant, CSL Behring, King of Prussia, PA, 2015-present
- Chair, Africa Clinical Trials Data and Safety Monitoring Board, National Heart, Blood and Lung Institute: Sickle Cell, 2017-2021

**Professional Affiliations and Society Memberships**

- Member, American Society of Hematology, 1993-present
- Member, American Society of Pediatric Hematology-Oncology, 2001-present
- Member, Society for Free Radical Biology and Medicine, 2006-present

**Editorships**

- Reviewer, Sickle Cell Trait Literature, Social and Behavioral Research Branch, National Human Genome Research Institute, 2011-present
- Editorial Board, *Heliyon*, 2015-present

**Honors and Awards**

- Recipient, American Society for Hematology Research Training Award for Fellows Study
Section, 2018

John M. Kirkwood, MD

Dr. Kirkwood’s research focuses on melanoma immunobiology, therapy, and prevention. His translational laboratory studies have shown the immunological basis of IFN adjuvant benefits in the first neoadjuvant immunotherapy trial for melanoma. His research is now expanding these studies at Hillman and through ECOG-ACRIN, probing the role of molecularly targeted agents (BRAF, MEK, and PI3Kδ/γ inhibitors) that may improve upon the efficacy of anti-PD1 immunotherapy for adjuvant therapy of operable high-risk melanoma and treatment of advanced melanoma. His studies of monoclonal antibodies to the gangliosides of melanoma—and peptide differentiation antigens of melanoma alone and in combination with cytokine and growth factor immunomodulators—paved the way for the recent progress with immunotherapies in multiple other cancers. He has advanced the multimodal therapy of melanoma with surgery, stereotactic radiotherapy, and molecular antitumor agents. He is now pioneering novel clinical trials to assess the multiple potential combinations of recently-approved molecular and immunological therapies that are the focus of translational clinical research trials in melanoma for the foreseeable future.

Dr. Kirkwood’s laboratory is also engaged in the molecular and immunohistological analysis of melanoma and its non-obligate risk marker and potential precursor known as the dysplastic/atypical nevus. His studies of tissues obtained from institutional, regional, national, and international trials of therapy are resources for investigators working upon melanoma in the NCTN, and the international melanoma research community. Tumor tissues from patients participating in new combination therapies, neoadjuvant trials, and prevention interventions probed using current immunopathological and molecular approaches seek biomarkers that will more accurately predict response and toxicity of these interventions.

Study Sections

- Member, Scientific Advisory Committee and Grants Study Section, National Cancer Center, New York, NY, 1984-present
- Member, Scientific Advisory Committee and Grants Review Member, Cancer Research Institute, 1988-present
- Permanent Member, Research Proposal Review Section, The Harry J. Lloyd Charitable Trust, 2003-present
- Member, Melanoma Advisory Board and Study Section, The Harry J. Lloyd Charitable Trust, 2008-present
- Permanent Member, Peer Reviewed Cancer Research Program, Congressionally Directed Medical Research Programs (CDMRP), 2009-present
- Member, Scientific Grant Review Committee, Ocular Melanoma Foundation Fellowship, American Association for Cancer Research, 2014-present
- Permanent Member, Grant Review Study Section, Cancer Research Institute Clinic and Laboratory Integration Program (CLIP), 2014-present
- Member, Sentinel Node Biopsy in Melanoma Guideline Expert Panel, ASCO/SSO, 2016-present
- Permanent Member, The Italian Association of Medical Oncology (AIOM), 2016-present
- Member, Expert Panel, systemic Therapy for Melanoma Guidelines, ASCO, 2018-present
- Programmatic Panel Chair, Melanoma Research Program, Congressionally Directed Medical Research Programs (CDMRP), 2019-present

Advisory Committee Memberships and Leadership Positions

- Member, Principal Investigator Committee, ECOG-ACRIN, 1982-present
- Chair, Melanoma Committee, ECOG-ACRIN, 1989-present
- Member, Cancer and Tumor Registry Committee, University of Pittsburgh Medical Center, 1992-present
- Member, Combined Allied Health Professionals Review Subcommittee, University of
Pittsburgh, 1993-present

- Chair, Medical Advisory Board, Our Clubhouse, 2004-present
- Member, Board of Directors, Medical Advisory Board, AIM at Melanoma, 2004-present
- Co-Chair, International Melanoma Working Group, 2005-present
- Member, TAFC Faculty Oversight Committee, University of Pittsburgh, 2005-present
- Member, Committee on Tenure, Appointments, and Promotions, University of Pittsburgh Department of Medicine, 2007-present
- Member, Ad Hoc Appeals Committee, University of Pittsburgh School of Medicine, 2009-present
- Co-Chair, Melanoma Medical Oncology Committee, Via Pathways, 2010-present
- Member, Research and Education Foundation, ECOG-ACRIN, 2011-present
- Member, Scientific Planning Committee, ECOG-ACRIN, 2012-present
- Member, Interdisciplinary Biomedical Graduate Program, Cellular and Molecular Pathology, University of Pittsburgh, 2013-present
- Honorary Chair, 321Ride, The Woiner Foundation, 2013-present
- Honorary Chair, Steps Against Melanoma, AIM for Melanoma, 2016-present
- Member, Melanoma World Society, 2016-present
- Member, European Academy for Tumor Immunology (EATI), 2016-present
- Member, External Steering Committee, Melanoma Value Stream, Oregon Health & Science University, 2016-present
- Member, Research Methodologies in Immunotherapy Development Working Group, American Society of Clinical Oncology (ASCO), 2016-present
- Member, Scientific Advisory Board, Istari Oncology, 2018-2022
- Member, Academic Incentive Committee, University of Pittsburgh, 2018-present
- Member, Scholarly Research Project Program, University of Pittsburgh, 2018-present
- Member, Translational Cancer Immunotherapy Committee, University of Pittsburgh, 2018-present
- Consultant, I-O Unbranded Content Update, Bristol-Myers Squibb (BMS), 2019-2020
- Member, NKTR-214 AACR Scientific Advisory Council, Bristol-Meyers Squibb (BMS), 2019-2021
- Member, Tafinlar-Mekinist + Spartializumab Advisory Board, Novartis, 2019-2021
- Chair, Prevention Subcommittee, ECOG-ACRIN, 2019-present
- Member, Cancer Prevention Steering Committee, National Cancer Institute, 2019-present
- Member, Clinical Advisory Board, Harbour BioMed, 2020-2021
- Member, Metastatic Melanoma Advisory Board, Iovance Biotherapeutics, 2020-2021
- Sparta-DT Advisory Board, Novartis, 2020-2022
- Member, Moon Shots Scientific Advisory Board, MD Anderson Cancer Center, 2020-2025

Professional Affiliations and Society Memberships

- Member, American Federation for Medical Research, 1973-present
- Member, New York Academy of Sciences, 1974-present
- Member, American Society for Clinical Oncology, 1975-present
- Member, American Association for Cancer Research, 1975-present
- Member, ECOG-ACRIN, 1978-present
- Member, National Cancer Foundation, 1981-present
- Member, International Society for Interferon and Cytokine Research, 1986-present
- Member, Society for Immunotherapy of Cancer, 1986-present
- Member, International Society for Interferon and Cytokine Research, 1986-present
- Member, Clinical Immunology Society, 1990-present
- Member, Society for Investigative Dermatology, 1991-present
- Member, Society of Melanoma Research, 2007-present
- Member, American Medical Association, 2014-present
- Elected Member, Association of American Physicians, 2015-present
- Member, European Academy for Tumor Immunology (EATI), 2016-present

**Editorships**
- Associate Editor, *Clinical Cancer Research*, 1995-present
- Member, *American Journal of Clinical Oncology*, 1998-present
- Editorial Board, *Clinical Advances in Hematology & Oncology*, 2002-present
- Editorial Board Member, Compendium Editorial Board Subcommittee, Guidelines for Melanoma Committee, ASCO Cancer Education Committee, 2005-present
- Reviewer, Multiple Journals, 2010-present
- Editorial Board Member, *Journal of Translational Medicine*, Combinational Strategies Section, 2010-present
- Editorial Board, *OncoImmunology*, 2012-present

**Major Lectureships and Seminars**
- Presenter, Cambridge Healthtech Institute, Immunomodulatory Therapeutic Antibodies for Cancer, Boston, MA, August 2019
- Abstract Presenter, Society for Immunotherapy of Cancer (SITC), National Harbor, MD, November 2019
- Presenter, IO Unbranded Expert Program Activity, BMS, Altoona, PA, January 2020

**Honors and Awards**
- Recipient, Best Doctors in America, 1996-present
- Recipient, Castle Connolly America’s Top Doctors, 2001-present
- Recipient, Castle Connolly America’s Top Doctors for Cancer, 2005-present
- Honoree, G. David Roodman, MD, Excellence in Mentoring, University of Pittsburgh, October 2019
- Distinguished Service Professor of Medicine, University of Pittsburgh, October 2019

**Joseph E. Kiss, MD**
As a clinical investigator, Dr. Kiss has received federal funding for 13 years while part of several NHLBI-sponsored research programs, including the Transfusion Medicine Hemostasis/Thrombosis Clinical Trials Network (TMH-CTN), REDS-II and III programs [the Retrovirus(REDS-II) or Recipient (REDS-III) Epidemiology in Donors Study], and through the R01 award mechanism (STRIDE-Strategies to Reduce Iron Deficiency). His research interests include studies in thrombotic microangiopathies, particularly thrombotic thrombocytopenic purpura (TTP). He served as protocol lead/PI on the multicenter Study of TTP and Rituximab (STAR) trial in 2009. Although the trial was closed early, the study was innovative in its design to utilize immunotherapy (rituximab) up front in a randomized controlled trial in acquired (autoimmune) TTP that has served as a template for other non-randomized studies performed successfully in Europe. He continues his research work in TTP as a site PI for caplacizumab, a novel heavy chain monoclonal antibody that blocks VonWillebrand A1domain-platelet receptor Ib binding. He is also pursuing therapies for other thrombotic microangiopathies, such as Thrombocytopenia-associated Multiorgan Failure (TAMOF), and has plans for designing a randomized pilot trial utilizing plasma exchange.

**Advisory Committee Memberships and Leadership Positions**
- Invited Member, Joint Commission eCQM Blood Management Technical Advisory Panel, 2014-present
- Member, TTP Advisory Board, Sanofi-Genzyme, 2015-present
• Co-Chair, TTP/TMA Subcommittee, American Society for Apheresis, 2016-present
• Member, Heparin-induced Thrombocytopenia (HIT) subcommittee, American Society for Apheresis, 2016-present
• Member, Research Committee, American Society for Apheresis, 2016-present
• Member, Plasma Advisory Council, Haemonetics Corp., Braintree, MA, 2019-present

Professional Affiliations and Society Memberships
• Member, AABB, 2019-2020
• Member, American Society for Apheresis (ASFA), 2019-2020
• Member, American Society for Hematology (ASH), 2019-2020

Editorships
• Reviewer, Multiple journals, 2008-present

Major Lectureships and Seminars
• Lecturer, Medicine Grand Rounds, Department of Medicine, University of Pittsburgh, Pittsburgh, PA, November 2019
• Lecturer, Emerging Research in Convalescent Plasma Haemonetics, Webinar, May 2020

Anuradha Krishnamurthy, MBBS
Dr. Krishnamurthy strongly believes that drug development and translational research should be an integral part of cancer care. To that end, during a two-year drug development fellowship at the University of Colorado, she participated in writing early phase clinical trial protocols, reviewing industry written protocols, attending safety meetings and enrolling patients on clinical trials. She also attended the ASCO/AACR Methods in Clinical Cancer Research Workshop in 2017.

While at Colorado, Dr. Krishnamurthy was involved in a phase I clinical trial that combined selumetinib, a MEK inhibitor with Cyclosporin A, a Wnt inhibitor. Wnt pathway dysregulation is commonly seen in colorectal cancer, and this study looked at the toxicities and potential anti-tumor effects of the combination of Wnt and MEK inhibition. Results of this study have been promising. She has also been involved in the development of an early phase clinical trial combining a PD-1 inhibitor (Pembrolizumab) with a MEK inhibitor (Binimetinib) and a VEGF inhibitor (Bevacizumab) which examines the effectiveness of combining an immune checkpoint inhibitor with the immune modulatory effects of MEK AND VEGF inhibition.

Advisory Committee Memberships and Leadership Positions
• Member, Protocol Review Committee, UPMC Hillman Cancer Center, 2019-present

Professional Affiliations and Society Memberships
• Member, American Association for Cancer Research, 2018-present
• Member, American Society of Clinical Oncology, 2018-present

Major Lectureships and Seminars
• Invited Speaker, Updates in Gastrointestinal Cancer, Arnold Palmer Cancer Center, 2018-2019

Daniel Lee, MD, PhD
Dr. Lee’s research focuses on a mechanistic understanding of conditions and the development of novel therapies.

Professional Affiliations and Society Memberships
• Member, American Society of Clinical Oncology, 2014-present

Frank S. Lieberman, MD
Dr. Lieberman is director of the adult neuro-oncology program in the UPMC Hillman Cancer Center, and he oversees the design and conduct of clinical trials for patients with primary and metastatic brain tumors. He has more than 30 years of experience in the design and conduct of translation-
al therapeutic trials for brain tumor patients and currently serves as HCC’s Principal Investigator for participation in the Adult Brain Tumor Consortium, NRG Consortium, and ECOG-ACRIN and the Brain Tumor Treatment Consortium, having previously served as our institutional Principal Investigator for participation in the Collaborative Ependymoma Research Network. Dr. Lieberman also serves on the CNS Tumor Committee, Experimental Imaging, and Biomarker Committees for ECOG-ACRIN. He has a developed expertise and interest in immunotherapeutic and molecularly targeted approaches to high and low grade gliomas and is currently serving as principal investigator and co-investigator in glioma vaccine trials as well immune checkpoint inhibitor trials and in trials evaluating molecularly targeted therapeutic drugs. Additionally, Dr. Lieberman is a co-investigator on institutional imaging projects assessing novel PET tracers, high field strength MRI spectroscopy, and dynamic contrast imaging as early biomarkers of response in immunotherapeutic and molecularly targeted clinical trials for newly diagnosed and recurrent anaplastic glioblastomas. Dr. Lieberman has chaired the working group for Clinical Trials Design and Development for the NCI Quantitative Imaging Network. In collaboration with Marina Nikaforovna and Ronald Hamilton in the Department of Pathology, he has also participated in the development of one of the nation's largest clinically annotated molecular genomic databases for high- and low-grade gliomas.

Advisory Committee Memberships and Leadership Positions
- Member, Experimental Imaging Committee, ECOG, 2015-present

Professional Affiliations and Society Memberships
- Member, Neurooncology Section, American Academy of Neurology, 1990-present
- Member, Society for Neurooncology, 1996-present
- Member, American Society of Clinical Oncology, 1996-present
- Fellow, American Neurological Association, 2018-2020

Major Lectureships and Seminars
- Lecturer, Neurology Grand Rounds, University of Pittsburgh School of Medicine, 2019

Honors and Awards
- Honoree, Best Doctors, Pittsburgh Magazine, 2016-2020

Anna E. Lokshin, PhD
Dr. Lokshin’s research centers on the discovery and characterization of biomarkers for screening, diagnosis, and prognosis of cancer, particularly ovarian and pancreatic cancers. Her group has identified biomarker combinations that recognize ovarian cancer 1-4 years earlier than current methods (CA125 and transvaginal ultrasound) and pancreatic cancer 2-6 years earlier. Her lab is currently working on discovering biomarkers in several bodily fluids, including serum/plasma and urine and in exosomes obtained from these fluids. In additional, they are investigating the role of glycolysis and coagulation pathways in the early preneoplastic events of high-grade serous ovarian carcinoma and the role of exosomes in these events.

Study Sections
- Ad Hoc Reviewer, Cancer Drug Development & Therapeutics Oncology 2, U01 review PAR-18-91, National Institutes of Health, 2017-present

Professional Affiliations and Society Memberships
- Member, American Association for Cancer Research, 1989-present
- Member, Early Detection Research Network, 2003-present
- Member, American Society of Clinical Oncology, 2009-present

Editorships
- Associate Editor, Cancer Biomarkers Journal, 2004-present
- Reviewer, Multiple journals, 2006-present

Carissa A. Low, PhD
Dr. Low's research focuses on interactions between behavior, biology, and patient-centered outcomes in the context of cancer. She is particularly interested in the use of mobile and online technology to monitor and change health behaviors, psychological stress, and symptoms during cancer treatment. Current projects include a randomized controlled trial testing a smartphone- and smartwatch-delivered sedentary behavior intervention before and after cancer surgery and a project that combines smartphone and wearable sensor data with machine learning to remotely monitor symptoms during chemotherapy.

**Study Sections**
- Reviewer, Special Emphasis Panel, National Cancer Institute, March 2020

**Professional Affiliations and Society Memberships**
- Member, American Psychosomatic Society, 2006-present
- Member, Society of Behavioral Medicine, 2014-present

**Editorships**
- Associate Editor, *International Journal of Behavioral Medicine*, 2018-present

**Major Lectureships and Seminars**
- Speaker, Health Services Research Seminar, October 2019
- Speaker, Society for Personality and Social Psychology, Preconference, New Orleans, LA, February 2020

Dr. Luke focuses on translational therapeutic advances for malignant melanoma and early phase drug development for advanced cancers with particular expertise in the immunotherapy of cancer, having been a lead investigator for immunotherapies such as anti-PD1/L1, CTLA4, LAG3, TIM3, GITR, OX40, CD137, CD40, inhibitors of indolamine-dioxygenase, adenosine A2a receptor & arginase as well as agonists of STING & oncolytic virus. Dr. Luke maintains an ongoing interest in the molecular biology of cancer and particularly in the intersection between oncogene targeted small molecules and immunotherapy.

**Advisory Committee Memberships and Leadership Positions**
- Member, Protocol Review Committee A, UPMC Hillman Cancer Center, 2019-present
- Co-Chair, SITC Policy Committee, SITC, 2019-2020
- Member, Organizing Committee, Society for Melanoma Research, 2020

**Professional Affiliations and Society Memberships**
- Member, American College of Physicians (ACP, 2006-present
- Member, American Association for Cancer Research, 2012-present
- Fellow, American Society for Clinical Oncology (ASCO), 2013-present
- Member, Society for Immunotherapy of Cancer (SITC), 2014-present

**Editorships**
- Member, Editorial Board, *Oncology & Biotech News*, 2013-present
- Member, Editorial Board, *Oncology Live*, 2013-present
- Associate Editor, *Clinical Cancer Research*, 2019-present
- Social Media Editor, *Journal of Immunotherapy of Cancer*, 2019-present

**Major Lectureships and Seminars**
- Presenter, European Society of Medical Oncology (ESMO), 2019 ESMO Annual Meeting, Barcelona, Spain, September 2019
- Presenter, Clinica Universidad de Navarra, Facts and Hopes in Cancer Immunotherapy, Madrid, Spain, September 2019
- Presenter, SITC, SITC 2019 Annual Meeting, Washington, DC, November 2019
- Presenter, Melanoma Bridge 2019, Naples, Italy, December 2019
- Presenter, Cancer Cross Links, Oslo University Hospital, Oslo, Norway, January 2020
Yana G. Najjar, MD
Dr. Najjar seeks to advance the treatment of melanoma by complementing clinical care with the principles of translational science. Specifically, her research focuses on immunotherapy in advanced melanoma and its impact on the tumor microenvironment and the peripheral immune system. Dr. Najjar's goal is to develop rational combinations of immunotherapy, targeted therapy, and other agents that may potentially remodel the tumor microenvironment in order to render it less hostile to the host immune system. Current, ongoing projects include the impact of metabolism on immunotherapy in patients with advanced melanoma; uveal melanoma; targeted therapy plus immunotherapy in the first and second line setting; and neoadjuvant treatment approaches in melanoma.

Study Sections
• Member, Study Section, Department of Defense, January 2020

Advisory Committee Memberships and Leadership Positions
• Director, UPMC Hillman Cancer seminar series, 2018-present
• Member, Hillman Cancer Center Women's Task Force, 2018-present
• Member, Immunological Monitoring and Cellular Products Laboratory Advisory Board, 2018-present
• Member, Melanoma Steering Committee, ECOG, 2018-present
• Chair, Cancer Immune Responsiveness Task Force, SITC, July 2019
• Co-Chair, SITC Workshop, Society for Immunotherapy of Cancer, Houston, TX, July 2019
• Organizer, Cancer Immunotherapy Workshop Clinical Trials, SITC, 2020

Professional Affiliations and Society Memberships
• Associate Member, American Association for Cancer Research, 2010-present
• Member, American Society of Clinical Oncology, 2012-present
• Member, Society for Immunotherapy of Cancer, 2014-present
• Member, Society for Melanoma Research, 2017-present
• Member, Melanoma Core Committee, ECOG, 2018-present

Editorships
• Reviewer, Multiple journals, 2018-2019

Major Lectureships and Seminars
• Presenter, Regional Melanoma Translational Research Consortium, 2017-present
• Speaker, EDRN, 2019-2020
• Lecturer, SITC Women in Cancer Immunotherapy, WIN Leadership Institute, Seattle, WA, July 2019
• Speaker, ASCO Presentation-Melanoma, September 2019
• Speaker, TTT Retreat, October 2019
• Mentor, Leadership and Discovery Program (LEAD), December 2019
• Speaker, Immunotherapy Bridge Conference, Italy, December 2019
• Speaker, University of Pittsburgh Department of Biomedical Informatics, February 2020
• Speaker, TRCCC and RMTRC Meetings, March 2020
• Speaker, IC-ONC, 2020

Honors and Awards
• Scholar Award in Clinical Research, UPMC Hillman Cancer Center, July 2019

Enrico M. Novelli, MD, MS
The Novelli Lab focuses on elucidating the fundamental mechanisms underlying vascular dysfunction in sickle cell disease (SCD). Dr. Novelli’s initial research sought to clarify the mechanisms underlying pulmonary hypertension in sickle cell disease. Most recently, his research has focused on the
Division of Hematology/Oncology

Dr. Novelli is conducting an R01-funded longitudinal study of cognitive impairment and its neuroradiological correlates in adult patients with SCD. The study's goal is to explore small vessel disease biomarkers by MRI and how they predict the trajectory of cognitive impairment. A parallel study in sickle mice is also being conducted in Dr. Novelli's lab to explore the mechanistic pathways that lead to cognitive impairments in patients with SCD.

**Study Sections**
- Member, AHA Study Section, 2013-present
- Member, SBIR/STTR Study Section, NIH, 2015-present

**Advisory Committee Memberships and Leadership Positions**
- Director, Benign Hematology Conference, University of Pittsburgh, 2013-present
- Member, Scientific Committee on Thrombosis and Vascular Biology, American Society of Hematology, 2016-2020
- Member, Committee on Addressing Sickle Cell Disease, The National Academies of Science, Engineering, and Medicine, 2019-present

**Professional Affiliations and Society Memberships**
- Member, American Society of Tropical Medicine and Hygiene, 2008-present
- Member, American Society of Hematology, 2005-present
- Member, European Hematology Association, 2017-present
- Member, American Heart Association, 2017-present

**Editorships**
- Reviewer, Multiple journals, 2011-present
- Peer Reviewer, *UpToDate*, 2016-present

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**Solomon F. Ofori-Acquah, PhD**

Dr. Ofori-Acquah has a research interest in molecular hematology, endothelial barrier function, sickle cell disease (SCD), and global health. His basic science research is on the mechanisms of neutralizing erythroid danger associated molecular pattern (eDAMP) molecules. This work encompasses studies of developmental, genetic, and epigenetic regulation of hemopexin and heme oxygenase-1—the key neutralizing molecules of extracellular heme the prototypical eDAMP. His basic research is translated to understanding the role and mechanism of extracellular heme in the pathobiology of vascular complications in SCD. A major translational focus is acute chest syndrome, the leading cause of premature death in SCD. The Ofori-Acquah lab developed the first mouse model of acute chest syndrome. This preclinical model is currently being used to find targeted therapies for this syndrome. His global health research centers on a longitudinal observational study of a large newborn cohort in Ghana to define markers of end-organ damage in SCD. Additional global health work focused also on SCD is performed under the auspices of the H3Africa consortium with a multi-disciplinary team of collaborators in Cameroon, Tanzania, and South Africa. Dr. Ofori-Acquah directs a research education NIH-funded R25 program aimed at catalyzing the training of graduates, postdocs, and junior faculty in blood science research. He is Visiting Professor and Director of a Human Genetics graduate course in a Wellcome Trust-funded DELTAS (Developing Excellence in Leadership, Training and Science) program at the University of Ghana in collaboration with the Pitt Graduate School of Public Health.

**Study Sections**
- Member, Respiratory Integrative Biology and Translational (RIBT) Science Study Section, NIH, 2013-2019
- Member, Ad Hoc Grant Review Committee, Minority Medical Student Award, American
Ellen M. Ormond, PhD
Dr. Ormond’s research is focused on quality improvement initiatives in advance care planning, assessment of frailty, patient-reported outcomes, and end of life care.

Advisory Committee Memberships and Leadership Positions
• Member, Ethics Committee, UPMC Presbyterian/Shadyside, 2014-present
• Member, Allied Health Committee, UPMC Presbyterian/Shadyside, 2015-present
• Member, Clinical Leadership Council, University of Pittsburgh Department of Medicine, 2016-present
• Member, UPMC Safenet Initiative, 2017-present
• Member, Oncology ED Steering Committee, UPMC Hillman Cancer Center, 2017-present
• Member, Patient Education Governance Committee, UPMC, 2018-present
• Member, Quality and Safety Committee, UPMC Shadyside Hospital, 2018-present

Professional Affiliations and Society Memberships
• Member, American Society of Clinical Oncology, 2017-present

Amma T. Owusu-Ansah, MD
Dr. Owusu-Ansah’s primary research interest is in translating novel or repurposed therapeutics into clinical settings to prevent or halt the progression of complications of sickle cell disease. Her other interests are in global health and implementation research, specifically identifying strategies to improve access to state-of-the-art medical care for individuals with benign hematologic disorders in different demographic regions of the world.

Professional Affiliations and Society Memberships
• Member, Global Sickle Cell Disease Network, 2010-present
• Member, American Society of Hematology, 2011-present
• Member, American Society of Pediatric Hematology and Oncology, 2011-present

Vida Cecilia A. Passero, MD, MBA
Dr. Passero’s research interests include the development of collaborative, innovative cancer care models using telemedicine.

Donna M. Posluszny, PhD
Dr. Posluszny has conducted psychosocial and behavioral research in a variety of cancer popula-
tions, including breast, gynecologic, head and neck, and hematological malignancies. She recently completed an NIH-funded prospective, longitudinal study examining adherence to the medical regimen for hematological cancer patients who are post allogeneic hematopoietic cell transplantation (HCT) and their family caregivers. To enhance outcomes and minimize risks associated with HCT, patients and their caregivers must work together as a team to carefully adhere to the multi-component post-HCT medical regimen, consisting of multiple daily medications, frequent clinic visits, strict catheter care, health monitoring, and dietary and lifestyle restrictions. Dr. Posluszny is currently examining psychosocial and behavioral strategies to help HCT patients and family caregivers manage each component of the post-HCT regimen together, and thus improving psychological and health outcomes. She is also interested in family caregiver well-being, health, burden, and impact on patient outcomes.

Advisory Committee Memberships and Leadership Positions
- President, Board of Directors, nbmtLINK, 2019-present

Professional Affiliations and Society Memberships
- Member, American Psychological Association, 1994-present
- Member, Division of Clinical Psychology, APA, 2002-present
- Member, Psychologists in Academic Health Centers, APA, 2003-present
- Member, Pennsylvania Psychological Association, 2003-present
- Member, Division of Health Psychology, 2008-present
- Member, Society of Behavioral Medicine, 2009-present
- Member, American Society of Clinical Oncology, 2014-present
- Member, American Psycho-social Oncology Society, 2015-present

Editorships
- Ad hoc reviewer, Multiple journals, 2014-present

Major Lectureships and Seminars
- Invited Speaker on behalf of the Leukemia and Lymphoma Society, Oncology Nursing Society, Greater Pittsburgh Chapter, October 2019

Tirthadipa Pradhan-Sundd, PhD
Liver fibrosis, inflammation and loss of blood biliary barrier are the hallmark of chronic liver injury. Several experimental models have been used to mimic the end-stage pathophysiology of chronic liver injury. However, the underlying differences in the molecular mechanism driving liver injury in different models remains largely unknown due to our inability to visualize the progression of liver injury in vivo in mice. Dr. Pradhan-Sundd has introduced quantitative Liver Intravital Microscopy (qLIM) that enables real-time assessment of bile transport and blood-bile barrier (BBB) integrity in the intact liver of live mice (Pradhan-Sundd et al., Hepatology, 2017, Gastroenterology, 2018). Using qLIM, she seeks to understand the mechanisms of chronic live injury initiation, progression, and recovery processes in experimental and disease models. Another of Dr. Pradhan-Sundd's longstanding interests is to understand the molecular mechanism of Sickle cell hepatic crisis. Sickle cell disease (SCD) is an autosomal recessive genetic disorder that affects ~100,000 Americans and millions of people worldwide. Sickle cell anemia can affect any part of the body and one of the main organs to be affected is the hepatobiliary system. Using qLIM in a transgenic, humanized mouse model of SCD that exclusively expresses sickle human hemoglobin, she has identified sinusoidal ischemia, impairment of canalicular bile secretion, and intrahepatic accumulation of bile acids in SCD mice. Understanding the molecular events that initiate and promulgate SCD induced hepatobiliary injury has great potential to prevent hepatic insult and progressive liver damage in SCD.

Margaret V. Ragni, MD, MPH
Dr. Ragni has actively initiated and participated in clinical translational research in congenital hemostasis and thrombosis disorders. She has served as chair of clinical trials, prospective epidemiolog-
ic, observational, case-control studies, cost-effectiveness analyses, and investigator-initiated new drug trials in hemophilia and VWD. Dr. Ragni's research studies were among the first multi-center NIH-funded investigator-initiated studies in hemophilia malignancy (NCI), hemophilia inhibitor formation (NHLBI), hemophilia HIV/HCV infection (NHLBI), hemophilia AIDS therapy (NIAID), and hemophilia adult prophylaxis (NHLBI). She co-chaired the State of the Science NHLBI Working Group to Prevent and Eradicate Inhibitor in hemophilia; and co-chaired the State of the NHLBI Science SOS Hemophilia & VWD Subcommittee to design future trials, with one U01 NHLBI trial in VWD, one X01 NHLBI grant to design rare trials, a T35 Training Grant, and two past U34NHLBI trials and one past R34 NHLBI trial in hemophilia and VWD. She has collaborated on multi-center organ transplant HIV trials (NIAID), hemophilia gene therapy trials (NHLBI), VWD genotype-phenotype studies (NHLBI), novel therapeutics (siRNA-AT3 and extended half-life protein trials (VIIa, VIII, IX) for hemophilia, and rhIL-11 and recombinant VWF for VWD. Dr. Ragni is planning to serve as PI of a UG3UH3 multicenter clinical trial to prevent and eradicate inhibitors, and as Co-Director of a T32 Clinical Translational Hematology Grant.

Study Sections
- Member, Research Award Review Committee, Foundation Women Girls Bleed Disorders (FWGBD), 2015-present
- Annual Grant Reviewer, Foundation Women Girls Blood Disorders (FWGBD), 2019-present
- Member, The Beutler Prize Selection Committee, American Society of Hematology, Women in Hematology, 2019
- P3HVB Grant Reviewer, Vascular Medicine Institute, 2019
- Ad Hoc Reviewer, Grant K99 ZHL1 CSR-Q, National Institutes of Health (NHLBI), 2020

Advisory Committee Memberships and Leadership Positions
- Board Member, Hemostasis & Thrombosis Research Society, 1990-present
- Member, Medical and Scientific Advisory Committee, National Hemophilia Foundation, 1991-present
- Member, Advisory Board, Foundation for Women & Girls with Blood Disorders, 2011-present
- Ad Hoc Consultant, Food and Drug Administration (FDA), 2015-2019
- Member, Fitusiran Alnylam Advisory Board, Sanofi, 2016-present
- Chair, Inhibitor Treatment Guidelines Working Group, World Federation Hemophilia (WFH), 2016-present
- Member, Hemophilia Treatment Guidelines Working Group, World Federation of Hemophilia, 2016-present
- Member, rVWF Advisory Board, Shire/Takeda, 2017-present
- Member, ASH-Palooza Committee, American Society of Hematology, 2018-2019
- Member, Women in Hematology Committee, American Society of Hematology, 2018-2019
- Elected Member, HTRS/NASTH Board of Directors, Hemostasis & Thrombosis Research Society (HTRS), 2018-2020
- Co-Chair, Research Colloquium, Hemostasis Thrombosis Research Society (HTRS), 2019-present
- Member, Advisory Board, Spark/Roche, 2019-present
- Member, BIV001 Advisory Board, Bioverativ/Sanofi, 2019-present
- Member, BMN Gene Therapy Advisory Board, Biomarin, 2019-present
- Chair and Author, ATHN 11 Protocol, American Hemostasis Thrombosis Network (ATHN), 2019
- Member, ATHN 2 Protocol Steering Committee, American Hemostasis Thrombosis Network (ATHN), 2019
- Member, ATHN 5/6 Protocols Steering Committee, American Hemostasis Thrombosis
Network (ATHN), 2019
• Member, Mock FDA Blood Products Advisory Meeting, Sutimlimab, Sanofi, 2020

**Professional Affiliations and Society Memberships**
• Member, American Society of Hematology, 1983-present
• Member, World Federation of Hemophilia, 1984-present
• Member, National Hemophilia Foundation, 1987-present
• Member, National Heart Lung Blood Institute, 2002-present
• Member, International Society of Hemostasis and Thrombosis, 2007-present

**Editorships**
• Editorial Board, *Hemophilia*, 2000-present
• Associate Editor and Member, Editorial Board, Blood Advances, 2016-present
• Reviewer, Multiple journals (Academic Medicine, Annals Internal Medicine, Blood, Expert Review Hematology, Haemophilia, Haematologica, JAMA, J Thrombosis Haemostasis, New England Journal of Medicine), 2019-present

**Major Lectureships and Seminars**
• Invited Speaker, National Hemophilia Foundation, Annual Meeting, October 2019
• Invited Speaker, Education Program, American Society of Hematology (ASH), ASH Annual Meeting, Orlando, FL, December 2019
• Invited Speaker, Centers for Disease Control (CDC), Inhibitor Prevention Seminar, 2020
• Ariel Distenfeld Memorial Lecturer, New York University, 2020
• Invited Speaker, National Institutes of Health (NHLBI), Inhibitor Prevention and Eradication Protocol Seminar, April 2020
• Invited Speaker, World Federation of Hemophilia (WFH), Annual Meeting, June 2020

**Honors and Awards**
• Honoree, Best Doctors in America, *Pittsburgh Magazine*, 2016-present

**Priya Rastogi, MD**
Dr. Rastogi is involved with the development and implementation of Phase II and Phase III clinical trials, and she serves as the protocol officer for Phase II and Phase III adjuvant and neoadjuvant breast cancer clinical trials. Her research has been published in several medical journals, including *Journal of Clinical Oncology, Clinical Breast Cancer, New England Journal of Medicine, Oncology, Oncology Nurse Forum, Onkologie, Menopause*, and *Breast Cancer Research Treatment*.

**Advisory Committee Memberships and Leadership Positions**
• Member, Working Group, NSABP Breast Committee, 2005-present
• Vice Chair, Medical Affairs, NSABP, 2006-present
• Member, Steering Committee, CALOR, 2012-present
• Member, Operations Committee, Kathrine Trial, 2012-present
• Member, Breast, Working Group, and Publications Committees, NRG Oncology, 2013-present
• Member, Steering and Executive Committees, Olympia Trial, 2013-present
• Member, Steering Committee, NCI MBC Endpoints Working Group, 2016-present
• Co-Chair, New Investigator Committee, NRG Oncology, 2020-present

**Professional Affiliations and Society Memberships**
• Member, American Society of Clinical Oncology, 2002-present
• Member, American Association for Cancer Research, 2003-present
• Medical Director, NSABP Foundation, 2011-present

**Major Lectureships and Seminars**
• Presenter, NRG Oncology, Semi-Annual NRG Oncology Meetings, Philadelphia, PA and Houston, TX, 2019-2020
• Presenter, UPMC Hillman Cancer Center, San Antonio Breast Cancer Symposium, Pittsburgh, PA, February 2020

Robert L. Redner, MD
A member of the Cancer Therapeutics Program of the University of Pittsburgh Cancer Institute, Dr. Redner researches the molecular biology of leukemic transformation and myeloid differentiation. A major focus of his laboratory has been the mechanism underlying differentiation arrest in myeloid leukemia, investigating acute promyelocytic leukemia (APL) as a model system. His group first cloned the NPM-RAR translocation that characterizes the t(5;17) variant of APL, and his lab has had an active program studying the mechanism by which NPM-RAR generates the leukemic phenotype.

Study Sections
• Judge, Poster Session, UPMC Hillman Cancer Center, Annual Scientific Retreat, Pittsburgh, PA, 2019
• Member, TMDC Committee, American Society of Hematology, 2010-present

Advisory Committee Memberships and Leadership Positions
• Director, Clinical Oncology and Hematology Grand Rounds, UPMC Hillman Cancer Center, 2006-present
• Co-Chair, MDS Pathway, VIA Oncology, 2010-present

Professional Affiliations and Society Memberships
• Member, American Society of Hematology, 1995-present

Editorships
• Editorial Board, Clinical Medicine: Blood Disorders, 2008-present
• Editorial Board, Leukemia and Lymphoma, 2009-present
• Reviewer, Multiple journals, 2018-present

Linda B. Robertson, DPH, MSN
Dr. Robertson has multiple research interests, including decision-making, particularly as it relates to cancer prevention and early detection, including preventative vaccines. She continues to explore the growing problem of HPV infection in our community. In particular, she is interested in the assessment of individuals of lower SES and their knowledge of HPV infection, specifically methods of transmission, the potential for illness/disease, and prevention of HPV through behavior and vaccination. In addition, Dr. Robertson studies issues related to health equity and cancer care as the site PI for the RCT for “Accountability for Cancer Care through Undoing Racism and Equity (ACCURE).” Finally, Dr. Robertson, working with a multidisciplinary team, recently completed a pilot study using a mixed qualitative and geostatistical approach to characterize psychosocial stressors—and their spatial relationships with air pollution—across the city of Pittsburgh and to explore possible relationships with other exposures and cancer incidence.

Advisory Committee Memberships and Leadership Positions
• Board Chair, PA Immunization Coalition, 2015-present
• Co-Chair, Colorectal Cancer Committee, PA Department of Health, 2017-present
• Member, Executive Committee, PA Department of Health Cancer Coalition, 2019-present

Professional Affiliations and Society Memberships
• Member, American Public Health Association, 2015-present

Editorships
• Reviewer, Multiple journals (International Journal of Prevention Practice and Research, Journal of Qualitative Research, 2009-present

Major Lectureships and Seminars
• Lecturer, American Society for Radiation Oncology, Annual Meeting, Chicago, IL, September 2019
**Honors and Awards**
- Pennsylvania Breast Cancer Partner Recognition Award, Adagio Health, PA Commission for Women, 2019

**John C. Schmitz, PhD**

As Co-Director of the Cancer Pharmacokinetics and Pharmacodynamics Facility, Dr. Schmitz provides integrated pharmacodynamic (PD) services in support of translational and clinical HCC research programs. This includes (a) facilitating patient sample acquisition, processing, and storage; (b) analysis of serum-based biomarkers; (c) implementing existing NCI/CTEP PD assays; and (d) developing assays for measurement of novel PD endpoints. Our PD lab has developed and validated a quantitative multiplexed immunoblot assay for detection of phosphorylation of ATM in patients treated with DNA-damaging radiotherapy and chemotherapy. Dr. Schmitz's basic research focuses on development of novel chemotherapeutic targets and agents for the treatment of human colorectal cancer (CRC). Other research interests include identification and validation of traditional Chinese herbal medicines and/or natural compounds with anticancer activity by themselves and in combination with current therapies. Dr. Schmitz's lab has identified a 5-herb formulation that can enhance the cytotoxicity of 5-fluorouracil in animal models through inhibition of the RB/E2F1/TS pathway. Lab researchers are investigating the role of each herb in this interaction. His lab has also demonstrated that the quassinoid bruceantinol has potent antiproliferative activity against colorectal cancer cells and tumors. The lab revealed that the mechanism of action of bruceantinol was through inhibition of the STAT3 signaling pathway resulting in cancer cell growth inhibition.

**Advisory Committee Memberships and Leadership Positions**
- Member, UPMC HCC Protocol Review Committee, 2015-present

**Professional Affiliations and Society Memberships**
- Member, AACR, 1991-present

**Editorships**
- Editorial Board, *Oncology Research*, 2015-present
- Reviewer, Multiple Journals, 2016-present
- Editorial Board, *Cancer Chemotherapy and Pharmacology*, 2019-present

**Major Lectureships and Seminars**
- Keynote Speaker, Chinese Pharmacological Society, 12th Academic Conference on Traditional Chinese Medicine and Natural Medicine Pharmacology, Tianjin, China, October 2019
- Invited Lecturer, Shanghai University of Traditional Chinese Medicine, Shanghai, China, October 2019
- Invited Lecturer, Southern Medical University, Guangzhou, China, October 2019

**Craig D. Seaman, MD, MS**

Dr. Seaman's primary research focus is the role of aging and aging-related conditions in hereditary bleeding disorders, specifically von Willebrand disease and hemophilia. His current research interests include the role of cardiovascular disease and related disorders in von Willebrand disease and hemophilia; the effects of aging on von Willebrand factor levels and bleeding phenotype in von Willebrand disease; and the use of alternative descriptors of body weight for clotting factor concentrate dosing in overweight and obese patients with hemophilia.

**Advisory Committee Memberships and Leadership Positions**
- Member, Advisory Board, Bayer Pharmaceutics Company, 2017-present
- Member, Advisory Board, Genentech, 2018-present
- Member, Advisory Board, Spark Therapeutics, 2018-present
- Member, Presentation and Publication Committee, Community Counts: CDC Public Health Surveillance Project for Bleeding Disorders, 2018-present
Malabika Sen, PhD
Dr. Sen’s research focusses on understanding and characterizing epigenetic changes in lung tumor and the tumor microenvironment and development of therapeutic strategies based upon epigenetic alterations. In addition, her work includes studying the alterations in DNA methylation for use as predictive biomarkers for early detection of lung cancer. Her research seeks to elucidate epigenetic alterations contributing to increased oncogenic signaling and investigate mechanisms including the role of the tumor microenvironment in a series of preclinical models and use therapeutic strategies to predict sensitivity in NSCLC.

Study Sections
• External Reviewer, Cancer Research Training Travel Awards for LMIC Investigators, CRDF Global, on behalf of the National Cancer Institute, 2019

Editorships
• Editorial Board Member, Journal of Cancer Diagnosis, 2016-present
• Reviewer, Multiple journals (Molecular Carcinogenesis, Scientific Reports, Cancer), 2019-present

Warren D. Shlomchik, MD
Dr. Shlomchik’s research program is dedicated to understanding the complex immunology of allogeneic hematopoietic stem cell transplantation. At the bench, Dr. Shlomchik’s research has primarily taken genetic approaches with mouse models to test fundamental hypotheses regarding alloSCT immunology, in particular mechanisms of graft-vs-host disease (GVHD), graft-vs-leukemia (GVL) and GVL-resistance. A goal of these studies is to make discoveries that can be translated in the clinic. One such discovery resulted in co-developing a reagent to deplete naïve T cells (TN) from stem cell products, thereby allowing the transfer of only memory phenotype T cells. The results of the first-in-human trial of this approach in patients with acute leukemia suggest that the depletion of naïve T cells results in a remarkably low rate of chronic GVHD without an increase in relapse or infections. This approach is now being examined in a 4-arm clinical trial that includes high or lower intensity conditioning and grafts that are from HLA-matched related HLA-matched unrelated donors.

Recently, Dr. Shlomchik published his research that for effective GVL, myeloblastic leukemias must be stimulated by IFN- whereas chronic phase CML does not require any IFN stimulation as demonstrated by GVL sensitivity of chronic phase CML genetically lacking the IFN-R and IFNAR1 or lacking STAT1 and STAT2 (JCI, 2017). He is now trying to understand how IFN- sensitizes myeloblasts and is in the planning stages of a clinical trial of IFN- therapy in collaboration with the Royal Brisbane Hospital. Dr. Shlomchik has also established a system wherein GVHD-inducing T cells can be clonally tracked, and using this system he has strong preliminary data that GVHD is locally maintained in
tissues, rather than alloreactive T cells in different tissues and secondary lymphoid tissues being in equilibrium. Additionally, Dr. Shlomo Chik has been using a tractable GVL system to understand GVL failure, determining that GVL-inducing T cells fail due to the progressive loss of antigen stimulation and due to T cell exhaustion. Antigen presentation can be augmented by an agonist antibody to CD40 whereas exhaustion can also be diminished by anti-CD40 and even more so by PD-1 blockade. He has found no evidence for selection of GVL-resistant leukemias, though this can happen clinically. Lastly, current research has also suggested that use of minor H antigen (miHA)-specific memory T cells can dramatically improve allogeneic bone marrow engraftment without GVHD and that this is also augmented by anti-CD40. Future work will test this approach in autoimmunity models and to create tolerance to solid organ transplants.

**Study Sections**
- Ad hoc Reviewer, P01, NIH, 2019-2020
- Ad hoc Reviewer, special emphasis panel, NIH, 2019-2020

**Advisory Committee Memberships and Leadership Positions**
- Director, Hematopoietic Stem Cell Transplant, Cell Therapy, and Hematologic Malignancy Program, UPMC/University of Pittsburgh, 2015-present
- Member, Advisory Board, Immune Transplant Therapy Center, 2016-present
- Member, Advisory Committee, Cancer Center IMCPL, 2016-present
- Director, Clinical Research Search Committee, University of Pittsburgh, 2017-present
- Member, Starzl Executive Committee, 2018-present
- Member, Advisory Committee, Discovery Acceleration and Support Hub (DASH), 2018-present
- Member, Organizing Committee, 4th International Workshop on Clinical Tolerance, 2018-present
- Member, Scientific Advisory Committee, Washington University SPORE in Leukemia, 2019-2020
- Member, T32 Advisory Committee, University of North Carolina, 2019-2020
- Member, Scientific Organizing Committee, American Society for Transplantation and Cellular Therapy/Center International Blood and Marrow Transplant Research, 2019-2021
- Head, Scientific Advisory Board, Bluesphere Bio, 2019-present
- Member, Scientific Organizing Committee, Transplant and Cellular Therapy Meeting, 2020

**Professional Affiliations and Society Memberships**
- Member, American Society for Clinical Investigation, 2017-present
- Member, American Society for Hematology, 2017-present
- Member, American Society for Transplantation and Cellular Therapy, 2017-present
- Member, American Association of Immunology, 2017-present
- Member, Association of American Physicians, 2019-present

**Editorships**
- Reviewer, Multiple journals, 1999-present
- Consulting Editor, JCI Insight, 2019-present

**Major Lectureships and Seminars**
- Invited Plenary Speaker, Institute of Xuzhou Medical University, 11th Annual Meeting of the Chinese Society of Bone Marrow Transplantation in Hefei, Jiangsu Province, China, September 2019
- Invited Speaker, Chinese Society for Blood and Marrow Transplant, 11th Annual Meeting, Hefei, China, September 2019
- Invited Speaker, Fondazione Ri.Med, 13th Ri MED Scientific Symposium, Palermo, Italy, October 2019
Roy E. Smith, MD
Dr. Smith served as the Director of Medical Affairs for the NABP. He has had an interest in breast and colorectal clinical trials for many years. Dr. Smith is a former chairman of the Central Investigational Review Board for Cancer Therapy Evaluation Program of the National Cancer Institute and has played a key role in revising its role in the conduct of Cooperative Group Program trials. He is interested in immune thrombocytopenic purpura and porphyria.

Advisory Committee Memberships and Leadership Positions
- Member, Coagulation Committee, The American Society for Pheresis, 2014-present
- Inaugural Director, ASH Medical Educators Institute, 2014-present
- Member, Governance Committee, National Pulmonary Embolus Response Team Consortium, 2014-present
- Member, Advisory Board, Cold Agglutinin Disease, June 2020

Professional Affiliations and Society Memberships
- Member, American Medical Association, 1978-present
- Member, American Society of Clinical Oncology, 1979-present
- Member, American Society of Hematology, 1980-present
- Fellow, American College of Physicians, 1980-present
- Member, American Society for Apheresis, 1996-present
- Member, Internal Society of Thrombosis and Haemostasis, 2014-present
- Member, North American Society of Thrombosis and Hemostasis, 2014-present

Editorships
- Editorial Board, Journal of Hematology & Thrombosis, 2014-present
- Editorial Board, Journal of Blood Disorders and Medicine, 2015-present
- Editorial Board, General Medicine Journal of OMICS Publishing Group, 2016-present

Major Lectureships and Seminars
- Co-Moderator, Case Presenter, PERT Consortium Meeting, 2019-2020
- Presenter, Shadyside Grand Rounds, UPMC Shadyside, 2019-2020
- Presenter, UPMC, Internal Medicine Residency Noon Conference, 2019-2020

Richard A. Steinman, MD, PhD
Dr. Steinman's laboratory studies the cancer microenvironment with a focus on the molecular and functional interactions between cancer cells, fibroblasts, and platelets in work supported over the past year by a Pennsylvania CURE grant. Platelets have been shown to support the growth and spread of cancer cells in multiple pre-clinical models. Dr. Steinman's laboratory has identified an unexpected pathway that appears to be necessary for platelets to aggregate in response to agonists, to secrete pro-tumorigenic molecules, and to interact with cancer cells. This pathway is a target of both clinically used drugs and of other agents in clinical trials. He is studying platelet function as a predictive biomarker for these clinical agents and studying how the pathway controls platelet functions.

Advisory Committee Memberships and Leadership Positions
- Member, External Advisory Board, MARC Program, Hampton University, 2014-present
- Director, Medical Scientist Training Program, 2019-2020
- Director, Burroughs Wellcome / Pitt Physician Scientist, 2019-2020
Quanhong Sun, PhD
Dr. Sun's research focus is determining the mechanism by which Measles virus nucleocapsid protein (MVNP) results in aberrant osteoclast differentiation. MVNP has been shown to be able to induce a Pagetic phenotype when transduced into osteoclast precursors—with increasing evidence that it can play a role in the development of Paget's disease. Dr. Sun's lab has reported that MVNP signals through the IKK family member TBK1 to increase IL-6, a key player in creating the pagetic microenvironment. Current studies seek to determine the mechanism by which MVNP regulates the competitive balance between TBK1 activity and levels of OPTN (a negative regulator) in osteoclasts. Dr. Sun's group is also using transgenic mouse models to determine whether increased TBK1 expression in OCL precursors will phenocopy MVNP or cooperate with p62P394L to generate the pagetic phenotype in mice. Further, the lab is testing whether TBK1 is required for the formation of pagetic lesions in vivo by crossing TBK1 conditional knockout mice with MVNP/P62KI mice. Dr. Sun is also interested in determining the role and mechanisms of TBK1 and its homolog IKK in other inflammatory bone diseases, such as multiple myeloma (MM) bone disease.

Honors and Awards
• Plenary Poster Award and Oral Poster Talk, American Society for Bone and Mineral Research, 2019-2020

Darcy L. Thull, MS
Dr. Thull's primary research interest is the use of hereditary cancer registries to facilitate research in cancer prevention, screening, and personalized care for families with hereditary cancer predisposition.

Advisory Committee Memberships and Leadership Positions
• Member, Advisory Board, University of Pittsburgh GSPH Genetic Counseling Program, 2011-present

Gijsberta J. van Londen, MD, MS
Dr. van Londen performs her own research, but also collaborates on research that is highly relevant to (older) cancer survivors. Her main focus points are the assessment and management of adverse effects of and adherence to self-administered cancer therapies as well as the needs of post-treatment cancer survivors.

Honors and Awards
• Recipient, Academy of Master Educators, 2019-2020

Major Lectureships and Seminars
• Presenter, UPMC Hillman Cancer Center, San Antonio Breast Cancer Society Review, Pittsburgh, PA, February 2020
Liza C. Villaruz, MD
Dr. Villaruz is a clinical and translational investigator in lung cancer who is actively involved in current clinical trials and who has a strong track record of successful development of institutional clinical trials through NCI-CTEP and industry. Dr. Villaruz actively develops clinical trials in both the HCC Lung Cancer Program (LCP) and the UM1 NCI ET-CTN with Phase I Emphasis at the HCC. She facilitates the interactions between the LCP and the Phase I Program. Among the institutional clinical trials developed by Dr. Villaruz is the NCI-CTEP UM1 sponsored multi-center phase I clinical trial of the ATR inhibitor VX-970 in combination with irinotecan in patients with solid organ tumors (UPCI 15-164/NCI P9938), which was developed in close collaboration with the translational and basic scientists at the UPCI. Dr. Villaruz is the HCC Principal Investigator for the Academic Thoracic Oncology Medical Investigators Consortium (ATOMIC), a national consortium of academic institutions that designs and conducts clinical trials in thoracic oncology.

Study Sections
- Reviewer, U01 Grants, National Cancer Institute, June 2020

Advisory Committee Memberships and Leadership Positions
- Member, Protocol Review Committee B, UPMC Hillman Cancer Center, 2009-present
- Member, Clinical Disease Pathway Committee, University of Pittsburgh, School of Medicine, 2011-present
- Member, The Academic Thoracic Oncology Medical Investigators Consortium, 2014-present
- Co-Director, LCSCC, 2015-present
- Member, Lung Cancer Mutation Consortium (LCMC), 2016-present
- Member, Lung MAP Trial Oversight Committee, SWOG, 2020-present

Professional Affiliations and Society Memberships
- Member, American Society of Clinical Oncology, 2010-present
- Member, International Association for the Study of Lung Cancer, 2014-present
- Member, European Society of Medical Oncology, 2019-present

Editorships
- Reviewer, Multiple journals, 2012-present
- Editorial Board, Oncology Research, 2016-present

Major Lectureships and Seminars
- Invited Speaker, Southwest General Health Center, Middleburg Heights, OH, September 2019
- Invited Speaker, OncLive, State of Science Summit, Pittsburgh, PA, September 2019
- Invited Speaker, University of Pittsburgh, Department of Medicine, DOM Grand Rounds, Hematology/Oncology Year in Review, Pittsburgh, PA, February 2020
- Invited Speaker, IASLC, IASLC 2020 Targeted Therapies of Lung Cancer Meeting, Santa Monica, CA, February 2020

Donald V. Woytowitz, MD
Dr. Woytowitz’s research interests are autoimmune hemolytic anemia, ITP, and Lupus anticoagulant.

Advisory Committee Memberships and Leadership Positions
- Member, Quality Collaborative, Pre-surgical Anemia Correction, 2015-present
- Member, Protocol Review Committee, University of Pittsburgh, 2016-present

Professional Affiliations and Society Memberships
- Member, American Society of Hematology, 1995-present

Editorships
- Reviewer, Multiple journals, 2018-present
- Editorial Board, Clinical Colorectal Cancer, 2019
Antoinette Wozniak, MD
Dr. Wozniak's research focuses on lung cancer, including small cell, non-small cell, and mesothelioma, as well as thymus gland cancer.

Study Sections
- Reviewer, American Lung Association, 2015-present
- Reviewer, V Foundation for Cancer Research, 2019-present
- Reviewer, Lung Cancer Research Foundation, 2019-present

Advisory Committee Memberships and Leadership Positions
- Lung Expert, Medical Advisory Panel, American Lung Association, 2015-present
- Member, New Member Engagement and Recognition Group, American Society of Clinical Oncology, 2017-present
- Member, Scientific Advisory Committee, Lung Cancer Research Foundation, 2017-present
- Medical Director, Clinical Research Services (CRS), UPMC Hillman Cancer Center, 2018-present
- Member, Clinical Research Oversight Committee (CROC), UPMC Hillman Cancer Center, 2018-present
- Member, Research Executive Advisory Committee, UPMC Hillman Cancer Center, 2018-present
- Member, Senior Leadership Team, UPMC Hillman Cancer Center, 2018-present
- Vice Chair, Women's Task Force, UPMC Hillman Cancer Center, 2018-present
- Member, Board of Directors, Mesothelioma Applied Research Foundation, 2019-present
- Member, Education Committee, International Association for the Study of Lung Cancer, 2019-present
- Member, Test Materials Development Subcommittee, American Society of Clinical Oncology, 2019-present

Professional Affiliations and Society Memberships
- Member, SWOG Cancer Research Network, 1984-present
- Member, American Association for Cancer Research (AACR), 1985-present
- Fellow, American College of Physicians, 1992-present
- Member, International Association for the Study of Lung Cancer, 2000-present
- Fellow, American Society of Clinical Oncology, 2018-present
- Member, Society for Immunotherapy of Cancer, 2018-present

Editorships
- Editor-in-Chief, Clinical Lung Cancer, 2019-present
- Editorial Board Member, Cancer Cells and Therapy, 2019-present

Major Lectureships and Seminars
- Lecturer, Medical Education Consortium, 14th Annual New Orleans Summer Cancer Meeting, New Orleans, LA, 2019-2020
- Oral Abstract Presenter, International Association for the Study of Lung Cancer, 2019 World Conference on Lung Cancer, Barcelona, Spain, September 2019
- Lecturer, European Prospective Investigation into Cancer, Lung Cancer in 2019 and Beyond, Barcelona, Spain, September 2019
- Lecturer, Xiangya Hospital, Central South University, Xiangya-UPMC Symposium on Cancer Genomics and Immunology, Changsha, Hunan, China, October 2019
- Lecturer, European Prospective Investigation into Cancer, Lung Cancer in 2019 and Beyond, New York City, NY, November 2019

Honors and Awards
- Honoree, Best Doctors in America, Pittsburgh Magazine, 2019-2020
- Recipient, Hillman Fellow for Innovative Team Science Cancer Research, UPMC Hillman Cancer Center, 2020
Dan P. Zandberg, MD
Dr. Zandberg is a translational and clinical researcher whose primary interest is the development of novel immunotherapy trials to improve outcomes in recurrent/metastatic squamous cell carcinoma of the head and neck.

Advisory Committee Memberships and Leadership Positions
- Member, Experimental Therapeutics and Rare Tumor Committee, Alliance for Clinical Trials in Oncology, 2016-present
- Member, Previously Untreated Locally Advanced Task Force, NCI Head and Neck Steering Committee, 2017-present
- Director, Head and Neck and Thyroid Cancer Disease Sections, University of Pittsburgh, Division of Hematology/Oncology, 2018-present
- Leader, Clinical Research Services Head and Neck Cancer Clinical Trials Team, UPMC Hillman Cancer Center, 2018-present
- Medical Oncology Co-Leader, UPMC Hillman Cancer Center Head and Neck Program, 2018-present
- Member, Advances in Cancer Immunotherapy Committee, SITC, 2018-present
- Member, Cancer Immunology and Immunotherapy Program, UPMC Hillman Cancer Center, 2018-present
- Member, Fellowship Selection Committee, University of Pittsburgh, Division of Hematology/Oncology, 2018-present
- Member, Head and Neck Cancer Clinical Disease Pathway Committee, Elsevier, 2018-present
- Member, Head and Neck Cancer Committee, ECOG-ACRIN, 2018-present
- Member, Pharmacy and Therapeutics Committee, UPMC Hillman Cancer Center, 2018-present
- Member, Research Executive Advisory Committee (REAC), UPMC Hillman Cancer Center, 2018-present
- Member, Translational and Clinical Research Strategic Vision Team, UPMC Hillman Cancer Center, 2018-present
- Physician Lead, UPMC Hillman Cancer Center, 2nd Floor, 2020-present

Professional Affiliations and Society Memberships
- Member, American Society of Clinical Oncology, 2011-present
- Member, American Association for Cancer Research (AACR), 2017-present
- Member, Society for Immunotherapy in Cancer, 2018-present

Editorships
- Reviewer, Multiple journals, 2016-present
- Editorial Advisory Board, Oncology Research, 2018-present

Honors and Awards
- Recipient, Cancer Clinical Investigator Team Leadership Award, National Cancer Institute, September 2019

Hassane M. Zarour, MD
Dr. Zarour’s research interests include the identification of novel MHC class II epitopes derived from tumor antigens expressed by melanoma. His laboratory has successfully developed the approach to identify T-helper epitopes derived from a number of human tumor antigens and capable of stimulation antigen-specific CD4+ T cells in patients with advanced cancer. A second interest is the development of novel melanoma vaccines trial with T-helper epitopes and adjuvants. His lab has performed clinical trials with MHC class I and MHC class II epitopes derived from the cancer/testis antigen NY-ESO-1 in combination with CPG in patients with advanced melanoma. The lab has also demonstrated the capability of CPG to stimulate potent and ex vivo detectable CD8+ T cell respons-
es to NY-ESO-1. A third research focus is the study of the mechanisms of melanoma-induced T cell dysfunction, including the role of the PD-1, Tim-3, BT LA and TIGIT pathways. These studies serve as rationale for ongoing clinical trials with dual PD1/Tim-3 and PD-1/TIGIT blockade in cancer patients, including melanoma. Finally, Dr. Zarour studies the role of the gut microbiome in modulating clinical and immune responses to immune checkpoint blockade in the context of a novel clinical trial with fecal microbiota transplant and anti-PD-1 antibodies in patients with PD1 refractory melanoma.

**Study Sections**

- External Reviewer, Clinical/Translational Science, Intramural Research Program, Ohio State University Comprehensive Cancer Center, 2019
- Reviewer, Moonshot Initiative, National Cancer Institute, July 2019
- Reviewer, SEP Cancer Diagnostics and Treatments, SBIR/STTR, November 2019
- Reviewer, ZRG-1-OTC-M-08 Immuno-Oncology Research, NCI, March 2020
- Reviewer, Institut National du Cancer (INCA, Frend NCI), 2011-present
- Reviewer, Melanoma Research Foundation, 2013-present
- Reviewer, SEP-2, Clinical and Translational R21 and Omnibus R03, National Cancer Institute, 2019-2020

**Advisory Committee Memberships and Leadership Positions**

- Member, Cancer Vaccine Collaborative Group, Cancer Research Institute, New York, NY, 2002-present
- Co-Leader, Cancer Immunotherapy Trial Network, University of Pittsburgh, 2011-present
- Co-Leader, Melanoma Program, UPMC Hillman Cancer Center, 2014-present
- Member, Internal Advisory Board, NiBIB Biomedical Technology Resource Center P41, 2015-present
- Member, Search Committee, Cancer Biology Program, UPMC Hillman Cancer Center, 2015-present
- Member, Shared Facilities Oversight Committee, UPMC Hillman Cancer Center, 2015-present
- Internal Advisory Board, Ovarian Cancer SPORE, UPMC Hillman Cancer Center, 2015-present
- Co-Leader, Cancer Immunology and Immunotherapy Program, UPMC Hillman Cancer Center, 2018-present
- Member, Executive Committee, Cancer Immunology Training Program (CITP), 2018-present
- Member, Tenured Faculty Promotions and Appointments Committee, University of Pittsburgh, 2019-present

**Professional Affiliations and Society Memberships**

- Member, Société Française de Dermatologie, 1996-present
- Member, American Association of Immunology, 2000-present
- Member, American Association for Cancer Research, 2000-present
- Member, Eastern Cooperative Oncology Group, 2000-present
- Member, American Society of Clinical Oncology, 2004-present
- Member, International Society for Biological Therapy of Cancer, 2005-present
- Member, Society of Immunotherapy of Cancer, 2010-present

**Editorships**

- Reviewer, Multiple Journals, 2002-present

**Major Lectureships and Seminars**

- Presenter, The Wistar Institute, Annual Skin SPORE Scientific Retreat, Philadelphia, PA, July 2019
- Presenter, FDA, FDA Mini-symposium on Microbiome and Cancer Immunotherapy, White Oak Campus, Silver Spring, MD, July 2019

Division of Hematology/Oncology
• Presenter, National Cancer Institute, Reproductivity of Probiotics and FMT in Cancer Clinical Research and Clinical Trial, NCI Shady Grove Campus, Bethesda, MD, September 2019
• Presenter, Immunotherapy Bridge & Melanoma, Naples, Italy, December 2019
• Presenter, UPMC Children’s Hospital of Pittsburgh, Topics in Pediatric Hematology/Oncology/BMT/CT Lecture, February 2020
• Presenter, CITP Committee/Trainee Mentor Meeting, Zoom presentation, May 2020

Honors and Awards
• James W. and Frances G. McGlothlin Chair, Melanoma Immunotherapy Research, 2019
## Grants and Contracts Awarded

**July 1, 2019 to June 30, 2020**

### Public Health Service

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<th>Investigator</th>
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<td>Biomarkers of Sulforaphane/Broccoli Sprout Extract in Prostate Cancer</td>
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<td>(PQS) Mitochondria are endocellular symbionts that serve as targets for immune recognition</td>
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<td>Peptide vaccine immunotherapy for children with recurrent low-grade astrocytomas</td>
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<td>Boyiadzis, Michael</td>
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<td>Trial Using Epsilon Aminocaproic Acid Therapy in Thrombocytopenia (TREAT)CC</td>
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<td>NCI NCTN-Network Lead Academic Participating Site at UPMC Hillman Cancer Center</td>
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<td>A Phase Ib Trial of Fulvestrant, Palbociclib (CDK4/6 Inhibitor) and Erdafitinib (IN)-42756493, Pan-FGFR Tyrosine Kinase Inhibitor in ER+/HER2+/FGFR-Amplified Metastatic Breast Cancer</td>
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<td>The Symptom Experience, Management and Outcomes According to Race and Social Determinants of Health (SEMOARS) During Breast Cancer Chemotherapy</td>
<td>NIMHD</td>
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<td>A cluster randomized trial of a primary palliative care intervention (CONNECT) for patients with advanced cancer</td>
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<td>Omics, mice and men: Development of precision transfusion medicine</td>
<td>NHLBI</td>
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<td>Neural mechanisms of nausea, vomiting, and energy balance dysregulation in animal models</td>
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<td>Infrared Neuromodulation Reveals a New Understanding of Ganglion Organization</td>
<td>NIH/Case Western Reserve University</td>
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<td>Harnessing Human Brain and Liver Microphysiological Systems for Testing Therapeutics for Metastatic Melanoma</td>
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<td>Using Smartphone Assessments for Personalized Prediction of Problematic Alcohol Use</td>
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<td>The Center for Enhancing Triage and Utilization for Depression and Emergent Suicidality (ETUDES) in Pediatric Primary Care</td>
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<td>Persistent Post-Mastectomy Pain: Randomized Clinical Trial of Targeted Pain Coping Skills Training (T-PCST) with Meditational Analysis</td>
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## PUBLIC HEALTH SERVICE

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**TOTAL PUBLIC HEALTH SERVICE**  
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## OTHER FEDERAL

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<td>Genomic and Commensal Variants Associated with Immunotherapy in Cancer Patients</td>
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<td>A New Persistence Mechanism for Drug-Tolerant Breast Cancer Cells</td>
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<td>Brufsky, Adam</td>
<td>Distant inflammation drives emergence from metastatic dormancy</td>
<td>U.S. Army</td>
<td>$15,799</td>
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<td>Brufsky, Adam</td>
<td>Leveraging Deep Learning and Bayesian Networks to Identify Risk Factors and Support Personalized Prediction for Metastatic Breast Cancer</td>
<td>U.S. Army</td>
<td>$62,725</td>
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<td>Donnenberg, Albert</td>
<td>Restoration of the Functional Aesthetic Craniofacial Envelope and Extremities</td>
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### OTHER FEDERAL

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<td>Emens, Leisha</td>
<td>Converting HR+ Breast Cancer into an Individualized Vaccine</td>
<td>DOD/Joan &amp; Sanford I. Weill Medical College of Cornell University</td>
<td>$25,000</td>
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<td>Najjar, Yana</td>
<td>Metabolic Remodeling of the Tumor Microenvironment to Improve the Efficacy of Immunotherapy</td>
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<td>$50,310</td>
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<td>Ragni, Margaret</td>
<td>Design of Less Immunogenic Factor VIII Proteins</td>
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**TOTAL OTHER FEDERAL** $418,508 $236,420

### STATE

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**TOTAL STATE** $407,297 $68,416

### SOCIETY AND FOUNDATIONS

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<tr>
<td>Agha, Mounzer</td>
<td>A Phase 2, Multicohort Open-Label Study of [Nj-68284528, a Chimeric Antigen Receptor T cell (CAR-T) Therapy Directed Against BCMA in Subjects with Multiple Myeloma</td>
<td>Janssen Pharmaceutica, L.P. Research Foundation</td>
<td>$330,746</td>
<td>$99,224</td>
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<td>Bao, Riyue</td>
<td>Integrative Analysis of Prognostic Factors to Neo-adjuvant Nivolumab/CMP-001 In Stage III B/C/D Melanoma</td>
<td>Melanoma Research Foundation</td>
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<td>Brusky, Adam</td>
<td>I-SPY2 TRIAL (Investigation of Serial Studies to Predict Your Therapeutic Response with Imaging And molecular Analysis 2): An Adaptive Breast Cancer Trial Design in the Setting of Neoadjuvant Chemo-therapy</td>
<td>Quantum Leap Healthcare Collaborative</td>
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<td>Burgess, Melissa</td>
<td>A Phase II Trial of MK-3475 (pembrolizumab) and Interferon Gamma 1-b Combination Immunotherapy in Patients with Previously Treated Mycosis Fungoides and Sézary Syndrome (Treatment Group 1) and in Patients with Advanced Synovial Sarcoma (Treatment Gro</td>
<td>Fred Hutchinson Cancer Research Center</td>
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<td>Burns, Timothy</td>
<td>Targeting the HGF-TWIST1 Pathway to Overcome MET TKI Resistance in NSCLC</td>
<td>American Cancer Society</td>
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<td>Coffman, Lan</td>
<td>Omics Consortium to Study the Origins of Ovarian Cancer</td>
<td>Magee-Womens Research Institute &amp; Foundation</td>
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<td>Targeting Tumor Desmoplasia to Enhance Immunotherapy</td>
<td>Magee-Womens Research Institute &amp; Foundation</td>
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<td>Coffman, Lan</td>
<td>Investigating the Role of Carcinoma-Associated Mesenchymal Stem Cells in Ovarian Cancer Metastasis</td>
<td>Mary Kay Foundation</td>
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<td>Integrative Analysis of Prognostic Factors to Neoadjuvant Nivolumab/CMP-001 in Stage III B/C/D Melanoma</td>
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<td>University of Pittsburgh Medical Center (UPMC)</td>
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<td>De Castro, Laura</td>
<td>Cognitive Behavioral Therapy and Real-time pain-management Interventions for Sickle cell via Mobile Applications (CaRISMA)</td>
<td>PCORI</td>
<td>$22,025</td>
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<td>Horn, Charles</td>
<td>OncoBioelectrx</td>
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<td>Kirkwood, John</td>
<td>Melanoma Tissue Bank Consortium</td>
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<td>Krishnamurthy, Anuradha</td>
<td>NSABP Subaward Agreement for Industrial Services Study</td>
<td>NSABP Foundation, Inc.</td>
<td>$30,696</td>
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<td>Ragni, Margaret</td>
<td>A Multicenter Study of Eradication of Hepatitis C Virus (HCV) Infection in People with Hemophilia and Bleeding Disorders (ATHN 6: HCV Eradication Study)</td>
<td>American Thrombosis and Hemoskisis Network</td>
<td>$7,219</td>
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<td>Ragni, Margaret</td>
<td>Hepatitis C Virus (HCV) Outcomes after Treatment with DAA in Patients with Bleeding Disorders (ATHS5: Outcomes Study)</td>
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<td>Ragni, Margaret</td>
<td>Hemophilia Inhibitor Response to Elocate (HIRE Study)</td>
<td>Blood Center of Wisconsin</td>
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<td>Rastogi, Priya</td>
<td>National Surgical Adjuvant Breast and Bowel Project - Oncologist (UP-Industrial-01)</td>
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<td>Shlomchik, Warren</td>
<td>Minor Histocompatibility Antigen-Reactive T Cells in a Mouse Model</td>
<td>University of Pittsburgh Medical Center (UPMC)</td>
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<td>Shlomchik, Warren</td>
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<td>University of Pittsburgh Medical Center (UPMC)</td>
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### SOCIETY AND FOUNDATIONS

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<td>Somasundaram, Ashwin</td>
<td>LAG3 on tumor specific CD8+ T</td>
<td>International Association for the Study of Lung Cancer Foundation</td>
<td>$50,000</td>
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<td>Villaruz, Liza</td>
<td>A Single Arm Phase II Study Osimertinib in Patients with Stage 4 Advanced Non-small Cell Lung Cancer with Uncommon EGFR Mutations</td>
<td>Duke University</td>
<td>$41,529</td>
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**TOTAL SOCIETY AND FOUNDATIONS**  
$3,752,797  
$793,065

### INDUSTRY

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<tr>
<td>Agha, Mounzer</td>
<td>A Phase 3, Multicenter, Randomized, Open-Label Study to Compare the Efficacy and Safety of bb2121 Verses Standard Triplet Regimens in Subjects with Relapsed and Refractory Multiple Myeloma (RRMM) (BarMMa-3)</td>
<td>Celgene Corporation</td>
<td>$897,664</td>
<td>$269,300</td>
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<td>Agha, Mounzer</td>
<td>A Phase 1b-2, Open-Label Study of JNJ-68284528, a Chimeric Antigen Receptor T cell (CAR-T) Therapy Directed Against BCMA in Subjects with Relapsed or Refractory Multiple Myeloma</td>
<td>Janssen Research &amp; Development, LLC</td>
<td>$810,100</td>
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<td>Brufsky, Adam</td>
<td>Clinical Outcomes Analysis of the Oncotype Dx Breast Cancer test</td>
<td>Agendia, Inc.</td>
<td>$83,076</td>
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<td>Coffman, Lan</td>
<td>Determine the effects of ALKS 4230 vs. recombinant human IL-2 on immune cells in the tumor microenvironment in cancer patients</td>
<td>Alkermes, Inc.</td>
<td>$57,103</td>
<td>$35,118</td>
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<td>Davar, Diwakar</td>
<td>An Open-label Phase 1 Study to Assess the Safety, Tolerability, Pharmacokinetics, Pharmacodynamics and Preliminary Efficacy of MEDI5395 in Combination with Durvalumab in Subjects with Select Advanced Solid Tumors (HCC 19-024)</td>
<td>Medimmune, Inc.</td>
<td>$1,140,080</td>
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<td>Davar, Diwakar</td>
<td>Randomized Phase 2 Neoadjuvant Study of PD-1 Inhibitor TSR-042 Singly vs. Combination of TIM-3 Inhibitor TSR-022 and PD-1 Inhibitor TSR-042 in Stage IIIB/C/D or Stage IV A/B Resectable Melanoma</td>
<td>TESARO, Inc.</td>
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<td>$605,147</td>
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<td>De Castro, Laura</td>
<td>A Phase II Randomized, Double-Blind, Placebo-Controlled Multi-Center Study to Assess the Safety, Tolerability, an</td>
<td>Bayer Corporation</td>
<td>$13,229</td>
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<td>Donnenberg, Albert</td>
<td>Assays to determine optimal dosing and therapeutic effects of localized immunotherapy for breast cancer metastatic to the pleura</td>
<td>METAvivor Research and Support, Inc.</td>
<td>$7,460</td>
<td>$392</td>
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<td>Dorrity, Kathleen</td>
<td>A phase I/II Study of lutetium (177Lu)-lilotomab satetaxetan (Betalutin(R)) antibody radionuclide conjugate for treatment of relapsed non-Hodgkin lymphoma</td>
<td>ICON Clinical Research</td>
<td>$149,007</td>
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<td>Kirkwood, John</td>
<td>Significance of IFNa Adjuvant Therapy Treatment and Clinical Outcomes on BRAF V600E Mutation vs. Wild Type Melanoma Patients in Correlation with Immunoscore Assessmen</td>
<td>Ventana Medical Systems Inc</td>
<td>$15,000</td>
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<td>Luke, Jason</td>
<td>Human Leukocyte Antigen Typing and Tumor Antigen Expression Profiling (HCC 19-112)</td>
<td>Immatics US, Inc.</td>
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<td>Phase 1 study evaluating genetically modified autologous T cells expressing a T-Cell Receptor recognizing a cancer/germline antigen in patients having solid tumors including but not limited to NSCLC or HNSCC (ACTengine IMA201-101) (HCC 19-113)</td>
<td>Immatics US, Inc.</td>
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<td>Luke, Jason</td>
<td>Phase 1 study evaluating genetically modified autologous T cells expressing a T-cell receptor recognizing a cancer/germline antigen in patients with recurrent and/or refractory solid tumors (ACTengine IMA202-101) (HCC 19-114)</td>
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<td>Luke, Jason</td>
<td>Phase 1 study evaluating genetically modified autologous T cells expressing a T-cell receptor recognizing a cancer/germline antigen in patients with recurrent and/or refractory solid tumors (ACTengine IMA203-101) (HCC 19-115)</td>
<td>Immatics US, Inc.</td>
<td>$508,212</td>
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<td>Luke, Jason</td>
<td>A Phase Ib/II study of ARRY-614 plus either nivolumab or ipilimumab in advanced melanoma, renal cell carcinoma, and solid tumors</td>
<td>Pfizer, Inc.</td>
<td>$3,265,725</td>
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<td>Ragni, Margaret</td>
<td>ALN-AT3SC-002 An Open Label Extension Study of Subcutaneously Administered ALN-AT3SC in Subjects with Moderate or Severe Hemophilia A or B who Have Completed a Previous Clinical Study with ALN-AT3SC</td>
<td>Arylan Pharmaceuticals</td>
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<td>Ragni, Margaret</td>
<td>A Prospective Non-Interventional Study of Bleeding Episodes, Factor VIII Infusions, and Patient-Reported Outcomes in Individuals with Severe Hemophilia A (BMN 270-902)</td>
<td>Biomarin Pharmaceuticals</td>
<td>$17,134</td>
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<td>Ragni, Margaret</td>
<td>Natural History Study of Factor IX Treatment and Complications (B-Natural)</td>
<td>Rho, Incorporated</td>
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<td>Ragni, Margaret</td>
<td>A Phase I/II, Open-Label, Adaptive, Dose-Ranging Study to Assess the Safety and Tolerability of SB-525 [AAV2/6 hFactor VIII Gene Therapy] in Adult Subjects with Severe Hemophilia A</td>
<td>Sangamo Therapeutics</td>
<td>$22,036</td>
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<td>Ragni, Margaret</td>
<td>Genotype and Phenotype Analysis of Adolescents with Heavy Menstrual Bleeding and Low Von Willebrand Activity</td>
<td>Shire/Baylor College of Medicine</td>
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<td>Ragni, Margaret</td>
<td>A Long-Term Follow-Up Study in Subjects with Severe Hemophilia B (Factor IX Deficiency) Who Received a Single-Stranded, Adeno-Associated Pseudotype B Viral Vector to Deliver the Gene for Human Factor IX (AAV8-HFIX19)</td>
<td>Spark Therapeutics</td>
<td>$18,802</td>
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<td>Ragni, Margaret</td>
<td>Dose-finding study of SPK-8016 gene therapy in patients with hemophilia A to support future evaluations in individuals with FVIII</td>
<td>Spark Therapeutics</td>
<td>$40,806</td>
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<td>Ragni, Margaret</td>
<td>Gene-transfer, Open-Label, Dose-Escalation Study of SPK-98011 [Adeno-Associated Viral Vector with B-Domain Deleted Human Factor VIII Gene] in Individuals with Hemophilia A</td>
<td>Spark Therapeutics</td>
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<td>Ragni, Margaret</td>
<td>SPK-8011-LTFU: A Multi-Center Evaluation of the Long-Term Safety and Efficacy of SPK-8011 (Adeno-Associated Viral Vector with B-Domain Deleted Human Factor VIII Gene) in Males with Hemophilia A</td>
<td>Spark Therapeutics</td>
<td>$28,905</td>
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<td>Sehgal, Alison</td>
<td>A Global Randomized Multicenter Phase 3 Trial to Compare the Efficacy and Safety of JCAR017 to Standard of Care in Adult Subjects with High-Risk, Transplant Eligible Relapsed or Refractory Aggressive B-Cell Non-Hodgkin Lymphomas (TRANSFORM)</td>
<td>Celgene Corporation</td>
<td>$500,332</td>
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<td>Villaruz, Liza</td>
<td>Phase 2 Trial of Brigatinib after Treatment with Next-Generation ALK inhibitors in Refractory ALK Rearranged NSCLC</td>
<td>Criterium Inc.</td>
<td>$113,050</td>
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<td>Zandberg, Dan</td>
<td>A phase II trial of personalized immunotherapy in patients with recurrent and/or metastatic squamous cell carcinoma of the head and neck that have progressed on prior immunotherapy (HCC 18-156)</td>
<td>Bristol-Myers Squibb</td>
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<td>Zarour, Hassane</td>
<td>Targeting Multiple Inhibitory Pathways to Reverse mTumor-Induced T Cell Dysfunction</td>
<td>Bristol-Myers Squibb</td>
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<td>Zarour, Hassane</td>
<td>Single cell RNAseq studies of therapy with CMP001 and Nivolumab in melanoma patients</td>
<td>Checkmate Pharmaceuticals, Inc.</td>
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**TOTAL INDUSTRY** $13,651,074 $3,949,531

| PUBLIC HEALTH SERVICE | $5,861,077 | $2,847,076 |
| OTHER FEDERAL         | $418,508  | $236,420   |
| STATE                 | $407,297  | $68,416    |
| SOCIETY AND FOUNDATIONS| $3,752,797| $793,065   |
| INDUSTRY              | $13,651,074| $3,949,531|
| **TOTAL**             | $24,090,752| $7,894,507|
The Division of Hematology/Oncology supports training at all levels, from medical school to fellowship to continuing medical education.

**Medical Students**

Michael Boyiadzis, MD, served as Director of MED 5715, Neoplasia and Neoplastic Diseases course, which is a 4-week elective offered to 4th-year medical students. The overall goal of this course is to expose students to the multidisciplinary approach to cancer diagnosis, patient management and follow up. It involves didactic lectures as well as practical clinic, pathology and radiology experiences. In addition to didactic lectures, there is a series of journal club sessions and one “Great Debate” involving a controversial topic in Medical Oncology. The course also includes an introduction to clinical research by exposing students to the different phases of clinical trials including lectures on biostatistical designs, study endpoints and outcomes. Finally, working in groups with an assigned biostatistician and a mentor (Dr. Boyiadzis), students are required to develop their own design for a research project that could be a clinical trial or a laboratory experiment to be presented on their final day of the course.

**Hematology/Oncology Fellowship**

Our fellowship program has continued to make significant changes and improvements over the past year, which re-affirms our ongoing commitment to the success of this program and its trainees.

Dr. Annie Im is the Program Director of our Hematology-Oncology Fellowship Program, and she has served in this role for the past three years since July 1, 2017. Dr. Tim Burns, a long-standing member of the Fellowship Curriculum Committee was appointed Associate Program Director for Research in July 2019. Dr. Vida Passero continues in her role as Associate Program Director, with responsibilities including oversight of the VA and assisting with clinical operations. And, Jen Roethlein was hired as the new program manager.

Major changes and other updates during FY20 include:

**COVID-19 Response**

- All fellowship conferences (fellows’ didactic and case conference, Journal Club, Research in Progress, Morbidity&Mortality/Root Cause Analysis) are now being held virtually through Microsoft Teams. Attendance at conferences has significantly improved with this change.
- Fellows on outpatient electives during April were pulled from these rotation in anticipation of increasing needs to support the care of COVID-19 patients. They were kept on reserve in case needs arose on the inpatient Oncology services, either from fellows (e.g., 2 pregnant fellows and one with a chronic medical condition) or from faculty. During this time, they developed study guides for the disease area in which they were supposed to have an elective month, and jointly presented at Hematology/Oncology Grand Rounds on “Hematologic complications in COVID-19” and “COVID-19 in Oncology patients.”
- Because of the COVID-19 situation, two wellness events were canceled. As a result, the Wellness Chairs used the funds to purchase home food kits for the fellows. In addition, weekly fellowship
happy hours through Zoom were held. Fellowship graduation was also held virtually through Microsoft Teams.

**Didactics/Conferences**
- Based on feedback from the fellows, the Benign Hematology conference was modified such that there were no fellow presentations on the days when there was a concurrent Malignant Hematology conference.
- Improvements to Journal Club included increased faculty attendance, faculty involvement in article selection and discussion, requirement of submitting a question about the articles to enhance fellow engagement, and quarterly off-campus location.
- The Malignant Hematology conference included more fellow involvement and presentations.

**Curriculum**
- The disease-specific outpatient rotations were revamped, where schedule templates were reviewed with the disease-specific faculty to ensure the optimal educational experience in terms of clinics and conferences, and disease-specific libraries for each rotation were created and uploaded into MedHub as background reading and as a reference for key articles.
- The 2nd year schedule structure was split into two 6-month blocks for research and clinical (rather than four 3-month blocks) to enhance continuity in research and continuity clinics.
- The hematopathology rotations were streamlined and restructured, which allowed for inclusion of the Gynecologic Oncology rotation during the 2nd year (rather than during the 3rd year research months).

**Teaching Opportunities**
- A library of lectures was created for the Team B (inpatient oncology) fellow to teach the housestaff on various oncology topics during the inpatient rotation.
- An e-curriculum for the benign hematology rotation was created by one of the outgoing chief fellows, which greatly facilitated teaching by the fellows to the housestaff and created an improved didactic structure.

**Benign Hematology**
The **Section of Benign Hematology** has solidified its role in the trainees' and fellows' education via multiple initiatives:
- A new T32 grant that combines cross-departmental strength in laboratory blood research, innovative, well-developed degree programs in clinical research and entrepreneurship, and translationally motivated hematology physician-scientist faculty research mentors.
- The Section has also developed an extensive core lecture curriculum that is presented primarily during the weekly benign hematology conferences. These conferences include formal lectures and clinical case presentations.
- Two outpatient (hematology clinic and coagulation service) four-week long rotation of residents and fellows have been redesigned and bolstered to better cater to the needs of trainees interested in pursuing careers in benign hematology.
- Section Faculty are also actively working at adding one fellowship spot for fellows who wish to receive combined benign hematology and blood banking and transfusion medicine training.
- Finally, beginning in spring 2021 in collaboration and with support from the American Society of Hematology (ASH), the Benign Hematology Section will host one of three programs nationwide dedicated to providing a 4-week inpatient and outpatient experience managing sickle cell disease to hematology fellows training at an institution that cares for SCD patients but does not have the infrastructure for comprehensive training of their fellows (The other programs will be held through John Hopkins and Duke Universities).
**Fellows Scholarly Activity**

- **Dr. Tim Burns** was appointed Associate Program Director for Research. In this role, Dr. Burns has oversight of the mentoring committees and research progress of all of the fellows, providing better structure, clear expectations, and formal feedback.

- Over the past year, fellows had multiple poster presentations at national meetings: 2 abstracts at Society for Immunotherapy of Cancer Annual Meeting, 2 abstracts at American Society of Hematology Annual Meeting, 1 abstract at the San Antonio Breast Cancer Symposium, 1 abstract at American Society of Clinical Oncology GI meeting.

Other accomplishments included: 2 fellows were on the NCI-funded T32 Cancer Therapeutics training grant, 1 fellow received the Gianni Bonadonna Breast Cancer Research Fellowship grant, 1 fellow was awarded best abstract at the ECOG Young Investigator's Symposium, 1 fellow completed her Masters of Science degree in Medical Education, 1 fellow continued work towards a PhD in Clinical Translational Science, 1 fellow attended the FDA Fellows Workshop in Silver Spring, Maryland, and 1 fellow attended the Hemophilia Academy in Edinburgh, Scotland.

**Miscellaneous**

- In addition to continuing the in-service exam action plans (study plan based on ITE results), board review course material was provided to all of the fellows. In addition, the fellow-run board review was restructured to a “Jeopardy” style format, enhancing participation.

- Our program implemented a “hematology/oncology boot camp” as part of the first-year fellows’ orientation, providing a broad overview and key points for numerous disease-specific oncology topics.

- Faculty attendance at fellow conferences, journal clubs, research-in-progress presentations was greatly improved this year. There was strong emphasis on the importance of faculty engagement and attendance from the division leadership.

- Faculty development sessions at division faculty meetings were held, which included fellowship expectations/rotation overview and strategies for verbal feedback.

**Continuing Medical Education (CME)**

The Division of Hematology-Oncology is deeply committed to continuing education of physicians and other oncology professionals.

On September 14, 2019, the Division hosted the 8th annual post-American Society of Clinical Oncology (ASCO) conference at the Herberman Conference Center for over 90 oncology physicians, nurses, pharmacists, and APPs throughout the tri-state region. This conference is designed for healthcare providers unable to attend the ASCO meeting held each year in Chicago—and to provide summaries of the most noteworthy presentations. **Dr. Edward Chu** continued in his role as course director, and several members of the Division, including **Drs. Adam Brufsky, Len Appleman, Diwakar Davar, Liza Villaruz,** and **Nathan Bahary**, provided important and timely reviews.

On February 1, 2020, the Division hosted a review of the most important and clinically relevant presentations from the 2019 San Antonio Breast Cancer Symposium for nearly 200 oncology professionals. This conference is specifically designed for providers involved in the clinical care of patients with breast cancer. **Drs. Adam Brufsky, Shannon Puhalla,** and **Dhaval Mehta** served as course directors.

Division faculty were involved in chairing other CME educational events held in Pittsburgh, including:

- **Robert Redner, MD**, continued to serve as Director of the HCC Clinical Grand Rounds Series held each Wednesday throughout the year from Sept. 2019-June 2020.

- **Franklin Bontempo, MD**, served as Course Director and faculty of the Cascade 2020, Advances In Hemostasis & Thrombosis Conference, held on May 4, 2020.
Clinical Fellows
* Indicates departing fellow

Steven Borson, MD
Medical School: Temple University School of Medicine
Residency: Barnes Jewish Hospital, Washington University School of Medicine

Kristine Gade, MD
Medical School: University of Virginia, School of Medicine
Residency: University of Virginia

Max Jameson Lee, MD, PhD
Medical School: Medical College of Virginia
Residency: Virginia Commonwealth University

Lilit Karapetyan, MD, MS
Medical School: Yerevan State Medical University
Residency: Michigan State University/Sparrow Hospital

Zahra Kelly, DO
Medical School: Philadelphia College of Osteopathic Medicine
Residency: UPMC

*Charlie Kuang, MD, PhD
Medical School: University of Michigan Medical School
Residency: UPMC
Current Position: T32 Postdoctoral Scholar, University of Pittsburgh
*Konstantinos Lontos, MD  
*Medical School: University of Athens School of Health Sciences  
*Residency: UPMC  
*Current Position: UPMC Academic Faculty Member

Nicoletta Machin, DO  
*Medical School: University of New England College of Osteopathic Medicine  
*Residency: UPMC

William Maguire, MD, PhD  
*Medical School: Weill Cornell Medical College  
*Residency: UPMC

Monica K. Malhotra, MD  
*Medical School: All India Institute of Medical Science, Ansari Nagar  
*Residency: Cleveland Clinic

*Azadeh Nasrazadani, MD, PhD  
*Medical School: Texas Tech University  
*Residency: UPMC  
*Current Position: UPMC Academic Faculty Member

Kevin Quann, MD, PhD  
*Medical School: Sidney Kimmel Medical College, Thomas Jefferson University  
*Residency: UPMC

*Asha Ricciuti, MD  
*Medical School: University of Central Florida, College of Medicine  
*Residency: University of South Florida, Morsani College of Medicine  
*Current Position: VA Western New York Healthcare System, Buffalo, NY

Anjali Rohatgi, MD, PhD  
*Medical School: Washington University in St. Louis School of Medicine  
*Residency: Weill Cornell Medical Center and Barnes Jewish Hospital

Rachel Rosenblum, MD  
*Medical School: Rutgers Robert Wood Johnson Medical School  
*Residency: Icahn School of Medicine at Mount Sinai

Saba Shaikh, MD  
*Medical School: Baylor College of Medicine  
*Residency: McGaw Medical Center of Northwestern University

*Neal Spada, MD  
*Medical School: University of Pittsburgh School of Medicine  
*Residency: UPMC  
*Current Position: UPMC Oncology Hematology Associates
Clinical Fellow Activities

Christine Garcia, MD

Presentations and Abstracts
- Poster Presentation, ASCO Quality Care Symposium, Phoenix, AZ, September 2019.

Max Jameson Lee, MD, PhD

Publications

Zahra Kelly, MD

Publications

Presentations and Abstracts

Charlie Kuang, MD, PhD

As a T32 Postdoctoral Scholar, Dr. Kuang studies epigenetic modifiers and immunotherapy combinations for the treatment of colorectal cancer.

Publications

Presentations and Abstracts
- Poster Presentation, Association of VA Hematologists and Oncologists, Minneapolis, MN, September 2019.

Honors and Awards
- Corrective Studies for UPCI 14-118: A Phase II Study of Pembrolizumab in Combination with Azacitidine in Patients with Refractory Metastatic Colorectal Cancer, ECOG Best Translational Young Investigator Abstract Award, Ft. Lauderdale, FL, October 2019

Konstantinos Lontos, MD

Publications

Presentations and Abstracts
- Poster Presentation, ASH, Orlando, FL, December 2019.

Honors and Awards
- Selected, PhD program, Clinical and Translational Science Institute, Pittsburgh, PA, July 2019.
Nicoletta Machin, DO

Presentations and Abstracts

Honors and Awards
• Participant, Hemophilia Academy 2019, Fort Edinburgh, UK, October 2019.

William Maguire, MD, PhD

Publications

Monica K. Malhotra, MD

Publications

Honors and Awards
• First Place, Recipient, Department of Medicine Fellows Teaching Competition, Pittsburgh, PA, July 2019.

Azadeh Nasrazadani, MD

Publications

Presentations and Abstracts
• Poster Presentation, 42nd Annual San Antonio Breast Cancer Symposium, San Antonio, TX, December 2019.

Honors and Awards
• Recipient, Gianni Bondonna Breast Cancer Research Fellowship, Conquer Cancer Foundation of ASCO, August 2019.

Kevin Quann, MD, PhD

Publications
• Kuang C, Quann K, Liman AK, Frye R, Alshoubaki N, Ramkumar M, Liman AD. A rare case of MGRS with immunotactoid glomerulopathy responding to bortezomib,

Asha Ricciuti, MD

Presentations and Abstracts
• Poster Presentation, ASH Annual Meeting, San Diego, CA, December 2019

Anjali Rohatgi, MD

Presentations and Abstracts
• Poster Presentation, SITC, Washington, DC, November 2019

Saba Shaikh, MD

Honors and Awards
• Second Place, Department of Medicine Fellows Teaching Competition, Pittsburgh, PA, May 2020

Neal Spada, MD

Presentations and Abstracts
• Poster Presentation, San Antonio Breast Cancer Symposium, San Antonio, TX, December 2019
Postdoctoral Fellows and Activities

**Huda Atiya, PhD**  
*Mentor: Lan G. Coffman, MD, PhD*  
Dr. Atiya is investigating the role of direct interaction between mesenchymal stem cells and tumor cells in enhancing ovarian cancer metastasis.

**Quanquan Ding, PhD**  
*Mentor: Hassane Zarour, MD*  
Dr. Ding is studying the role of CXCL13 releasing CD8+ T cells in melanoma patients.

**Vinod Kumar, PhD**  
Dr. Kumar focuses on the development of targeted therapeutic strategies for KRAS and EGFR mutant NSCLC.

**Itay Raphael, PhD**  
Dr. Raphael’s work is focused on understanding the mechanisms by which immune-checkpoint blockade drugs promotes development of autoimmune diseases in patient with melanoma.

**Faruk Sacirbegovic, PhD**  
*Mentor: Warren D. Shlomchik, MD*  
Dr. Sacirbegovic is currently working on understanding the maintenance of GVHD.

**Richard C. Wu, PhD**  
*Mentor: Dario Vignali, PhD*  
Dr. Wu is investigating the role of inhibitory receptor(s) expression on the function of T regulatory cells in metastatic cancer patients.

**Kui Zhao, PhD**  
Dr. Zhou is using two photon intravital microscopy and other approaches to understand how T cells are recruited into the marrow and whether chemokines direct them to leukemia cells after IFN-γ stimulation.

**Meng Zhou, PhD**  
*Mentor: Warren D. Shlomchik, MD*  
Dr. Zhou is examining how the graft-vs-leukemia effect in allogeneic stem cell transplantation fails due to insufficient alloantigen presentation and due to alloreactive T cells developing exhaustion, both of which can be overcome by targeted interventions.

**Bochra Zidi, PhD**  
Dr. Zidi is evaluating tumor antigen-specific immune responses in melanoma patients undergoing novel immunotherapies with 3rd generation immune checkpoint blockade.
Non-original research publications are in italics. Hematology/Oncology faculty are in bold.


Bennewitz MF, Tutuncuoglu E, Gudapati S, Brzoska T, Watkins SC, Monga SP, Pradhan-Sundt T, Sundt P. P-selectin-deficient mice to study pathophys-


Cobleigh M, Yardley DA, Brufsky AM, Rugo HS, Swain SM, Kaufman PA, Trip- athy D, Hurviz SA, O’Shaughnessy


Ebbert PT, Xavier F, Seaman CD, Rag-


Nasrabadani A, Brufsky AM. CDK4/6 inhibitors: taking the place of chemotherapy?. Lan-


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