Fiscal Year 2017 (April 1, 2016 - March 31, 2017) Accomplishments

Awards

- The **Population Assessment of Tobacco and Health (PATH) Study** was awarded another nine years of funding from the **National Institutes of Health (NIH)** and the **U.S. Food and Drug Administration (FDA)**. The study will be conducted by Westat of Rockville, Md., with **Roswell Park Cancer Institute (RPCI)** continuing as scientific lead and **Andrew Hyland, PhD**, Chair of the RPCI Department of Health Behavior, serving as principal investigator. Funding to Roswell Park over the term of the contract is expected to total $17.7 million. The objective of this research initiative is to provide information to support population-based tobacco regulations that serve to reduce the disease burden caused by tobacco.

- RPCI was named the **second most technologically advanced cancer center in the world** by the blog **Top Master's In Healthcare Administration**. According to Top Master's, two main factors were considered in its ranking. One was the range and quality of cutting-edge treatment options, including state-of-the-art facilities, operating rooms, patient services and top-of-the-line diagnostic, imaging and surgical methods/equipment. The second was the range and sophistication of innovative research practices. Roswell Park was specifically cited for its capabilities in electronerve stimulation, advanced endoscopy, balloon kyphoplasty, interventional pulmonology, interventional radiology, nuclear medicine and photodynamic therapy.

- **Danuta Kozbor, PhD**, Associate Professor of Immunology and Microbiology, and **Kunle Odunsi, MD, PhD**, Deputy Director, Chair of the Department of Gynecologic Oncology and Executive Director of the Center for Immunotherapy, received a three-year, $771,750 award from the **U.S. Department of Defense**. Their study will explore whether a class of drug candidates known as CXCR4 antagonists can be used to boost the efficacy of immunotherapy for ovarian cancer.

- **Gal Shafirstein, DSc**, Professor of Oncology in the Department of Cell Stress Biology and Director of Photodynamic Therapy Clinical Research, received a five-year, $278,707 subcontract award from the University at Buffalo (UB) for collaborative work with Anthony Campagnari, PhD, Senior Associate Dean for Research and Graduate Education and Professor of Microbiology and Immunology in the **Jacobs School of Medicine and Biomedical Sciences University at Buffalo**. The **National Institute on Deafness and Other Communication Disorders** provided this award for evaluating how photodynamic therapy (PDT) can be used to target infections.

- **Alan Hutson, PhD**, Chair of the Department of Biostatistics & Bioinformatics and Associate Director of the Biostatistics Shared Resource at Roswell Park, was named a scientific merit reviewer for the Improving Healthcare Systems Program of the **Patient-Centered Outcomes Research Institute (PCORI)**, an independent nonprofit organization. Dr. Hutson, who helped implement the Bioinformatics Core at Roswell Park and also serves as Professor and Chair of Biostatistics at the University at Buffalo, has a track record of working collaboratively with medical researchers on projects related to

cancer. He has more than two decades of experience in the area of clinical trial design and analysis, as well as expertise in computational statistics and diagnostic testing. An elected Fellow of the American Statistical Association, Dr. Hutson serves on several data safety and monitoring boards.

- **Fumito Ito, MD, PhD**, Assistant Professor of Oncology in the Department of Surgical Oncology and the Center for Immunotherapy, received two grants (a $43,729 award from the **American College of Surgeons** and a three-year $198,148 award from the **Melanoma Research Alliance)** to continue his work in immunotherapy with induced pluripotent stem cells (iPSCs)—adult stem cells reprogrammed to function like embryonic stem cells, which can differentiate into a wide range of tissues.

- **Joseph Tario Jr., PhD**, Senior Flow Cytometry Specialist, received a one-year, $105,907 grant from the **International Myeloma Foundation** to characterize a flow-cytometric assay designed to detect minimal residual disease in bone marrow samples in patients with multiple myeloma.

- **Kazuaki Takabe, MD, PhD, FACS**, Clinical Chief of Breast Surgery, Alfiero Foundation Chair and Breast Program Leader at RPCI, traveled to Washington, D.C., as a leader of the **4th U.S.–Japan Clinical Trials in Oncology Workshop**. The workshop guides young scientists in all aspects of designing compelling and effective clinical research studies in order to develop new cancer therapies. Attendees reviewed key concepts underlying cancer therapeutic clinical trials and explored opportunities for facilitating networking and collaboration among investigators from academia, industry and government-sponsored agencies. One objective of the workshop was to discuss and clarify the barriers that Japan is facing as it seeks to increase the number of clinical trials initiated there. Another objective was to spur the participation of Japanese institutions in international trials and to facilitate these international collaborations. This year's workshop focused on **precision medicine**.

- RPCI was once again named to **Becker's Hospital Review's 100 Hospitals** and Health Systems with Great Oncology Programs, an annual list of centers that are national leaders in patient care, cancer outcomes and research. Hospitals included on this list offer patients comprehensive cancer care involving teams of specialists, participation in clinical trials and personalized treatment programs. In selecting facilities for the Great Oncology Programs feature, the Becker's editorial team analyzed data from sources including the **BlueCross BlueShield Association Blue Distinction Center** program and **National Cancer Institute (NCI) designations**.

- **Maciej Goniewicz, PhD, PharmD**, Assistant Professor of Oncology in the Department of Health Behavior, received a two-year, $66,087 subcontract award from the **Minneapolis Medical Research Foundation**, part of a larger award from the **National Institute on Drug Abuse** to develop a new method of evaluating the relative abuse liability of electronic cigarettes in adolescents.

- **Sharon Evans, PhD**, Professor of Oncology in the Department of Immunology, received a one-year, $50,000 grant from the **Breast Cancer Coalition of Rochester** for her

investigation of newly discovered roadblocks that prevent cancer-killing immune cells from gaining access to breast tumor targets.

- **Sergei Kurenov, MS**, Assistant Professor of Oncology and Director of Surgical Simulation, received a one-year, $38,086 subcontract grant from the **University of North Carolina at Chapel Hill** to participate in the development of a virtual environment platform to enhance education, practice and research in clinical pharmacology.

- **Xuefang Cao, MD, PhD**, Associate Professor of Oncology in the Department of Immunology, received a one-year, $23,376 award from the **American Association of Immunologists (AAI)**. The grant, a 2016 AAI Careers in Immunology Fellowship, will support predoctoral student Wei Du's investigation of the role of an enzyme known as granzyme B in allogeneic hematopoietic cell transplantation, a treatment used for some blood cancers.

- **Junko Matsuzaki, PhD**, Assistant Professor of Oncology in the Center for Immunotherapy and Director of the Immune Analysis Facility, received a six-month, $20,000 grant from **Ono Pharmaceuticals** to evaluate the immunotherapeutic effect of the protein known as EP4 on certain immune cells.

- Roswell Park researchers received $33.8 million in federally funded grants from **National Institutes of Health (NIH)** agencies:

    - *(previously mentioned)* **Andrew Hyland, PhD**, Chair of the Department of Health Behavior, will receive an anticipated $17.7 million over nine years from the **National Institutes of Health and U.S. Food and Drug Administration (FDA)** for the ongoing **Population Assessment of Tobacco and Health (PATH) Study**, a longstanding effort to document and interpret tobacco use being led by Westat of Rockville, Md.

    - **Martin Morgan, PhD**, Associate Member of the Department of Biostatistics and Bioinformatics, received a five-year, $7.8 million award from the **National Human Genome Research Institute (NHGRI)** to continue development and dissemination of the Bioconductor Project, which helps researchers summarize the vast volumes of data elicited from decoding cancer tumor DNA and apply it to improve medical care.

    - **Mukund Seshadri, DDS, PhD**, Associate Professor of Oncology in the departments of Pharmacology and Therapeutics and Head and Neck Surgery, received two prestigious "R01" research grants to develop novel imaging methods and treatments for oral/head and neck cancers—a five-year, $2.1 million award from the **National Institute of Dental and Craniofacial Research** and a four-year, $1.5 million award from **the National Cancer Institute (NCI)**.

    - **John Subjeck, PhD**, Professor Emeritus of Oncology in the Department of Cell Stress Biology, received a five-year, $1.6 million R01 award from the **National**

Cancer Institute (**NCI)** to continue his work using large heat-shock proteins to improve cancer therapy.

- **Dominic Smiraglia, PhD**, Associate Professor of Oncology in the Department of Cancer Genetics, received a five-year, $1.93 million R01 grant from the **National Cancer Institute (NCI)** to test a new combination therapy intended to prevent prostate cancer recurrence.

- **Leigh Ellis, PhD**, Adjunct Assistant Professor of Oncology in the Department of Pharmacology and Therapeutics, received a two-year, $581,378 grant from the **National Cancer Institute (NCI)** for efforts to discover the genetic switches that drive aggressive forms of prostate cancer and identify biomarkers that could determine the aggressive potential of a patient's disease much earlier.

- **James Mohler, MD**, Associate Director, Senior Vice President for Translational Research and Chair of Urology, received a two-year, $416,398 award from the **National Cancer Institute (NCI)** to identify a small molecule that can prevent testosterone production by prostate cancer tissue—a key reason why advanced prostate cancer overcomes standard hormonal therapy.

- RPCI was designated as an official **Fundamentals of Laparoscopic Surgery (FLS) Test Center** after successfully meeting all required standards and criteria. The Institute is one of 21 approved FLS Test Centers in the Eastern and Mid-Atlantic regions of the U.S., and one of only three in New York State. Because they allow for significantly smaller surgical incisions using specialized tools and techniques, laparoscopic procedures are typically associated with a number of benefits compared to traditional "open" surgery, including less bleeding and pain, lower risk of infection and shorter hospital stays. FLS tests are administered monthly in the **Applied Technology Laboratory for Advanced Surgery (ATLAS) Program** at RPCI under the leadership of **Emese Zsiros, MD, PhD, FACOG**, a gynecologic oncologist and certified FLS-trained laparoscopic surgeon. The Roswell Park training program consists of comprehensive web-based education modules, hands-on skills training and administration of the FLS test.

- For the second year in a row, **Candace S. Johnson, PhD**, President and CEO, was ranked among the top ten most influential women in Western New York by Buffalo Business First. This year she earned the No. 3 spot in the **Power 100 Women** list, with Roswell Park Alliance Foundation Co-Founders, **Anne and Donna Gioia**, also being named to the list.

- RCPI was awarded more than $12.7 million in new grant funding during the third quarter of 2016, the majority of those funds from the **National Cancer Institute (NCI)**. These awards include two large NCI grants to **Christine Ambrosone, PhD**, Professor of Oncology and Senior Vice President for Population Sciences at the Institute, for her work in the area of breast cancer population research and more than $1.6 million in supplemental awards to the Institute's five-year, $19 million **NCI Cancer Center Support Grant (CCSG)**, the coveted award that accompanied renewal of the Institute's NCI

Comprehensive Cancer Center designation in 2014.

- **Dr. Ambrosone** and Lawrence Kushi, ScD, of **Kaiser Permanente Northern California** are principal investigators on a grant to maintain the Pathways study, a prospective study of lifestyle and genetic factors that may affect breast cancer outcomes. Roswell Park was awarded five-year funding of nearly $2.9 million to store and manage genomic samples and breast tumor tissue for future investigations.

- The second grant to Dr. Ambrosone, a five-year, $1.2 million subcontract award through **Vanderbilt University**, funds work on the Breast Cancer Genetic Study in African American Populations, a multi-institutional collaborative effort to sequence tumors and identify rare variants that may increase susceptibility to aggressive forms of breast cancer.

- Other Roswell Park grantees and their research projects are described below:

    - **David Goodrich, PhD**, Professor of Oncology, and **Leigh Ellis, PhD**, Adjunct Assistant Professor of Oncology, both from the Department of Pharmacology and Therapeutics, received a five-year, $2.5 million award from the **National Cancer Institute (NCI)** for their research on recurrent and resistant metastatic prostate cancer. Their project seeks to identify the mechanisms underlying resistant disease, which occurs after initially effective androgen-deprivation therapy, and to test new therapeutic approaches for blocking or reversing those mechanisms.

    - **Kunle Odunsi, MD, PhD, FRCOG, FACOG**, Deputy Director, Chair of Gynecologic Oncology and Executive Director of the Center for Immunotherapy at Roswell Park, received a five-year, $1.16 million award renewing a grant from the **NCI** for a Roswell Park fellowship program that helps surgical oncologists develop skills and expertise in basic science and translational research to prepare them for successful independent research careers, balancing clinical and laboratory skills training.

    - **Hans Minderman, PhD**, Assistant Director of the Flow and Image Cytometry Facility, received a five-year, nearly $1.3 million **NCI Research Specialist Award**. These awards support exceptional scientists who pursue research within the context of an existing cancer research program and who are vital to sustaining the biomedical research enterprise.

    - **Andrei Bakin, PhD**, Assistant Member of the Department of Cancer Genetics, received a three-year, $642,124 grant from the **Department of Defense Breast Cancer Research Program** to investigate a novel pathway driving the development of metastatic breast cancer. His team exploits novel anticancer agents that can suppress breast cancer

progression and enhance the anticancer activity of therapeutic agents.

- **Dr. Odunsi** and **Junko Matsuzaki, PhD**, Director of the Immune Analysis Facility, received a one-year, $550,298 award from the **NCI** supplementing the previously awarded **Roswell Park–UPCI Ovarian Cancer SPORE**. They are working to develop predictive biomarkers aimed at improving outcomes in immunotherapy clinical trials.

- **Xuefang Cao, MD, PhD**, Associate Member of the Department of Immunology, received a two-year, $435,234 **NCI** grant for an investigation into the way that adrenaline stress hormones affect immune response. The goal of this work is to manipulate adrenaline signaling to improve outcomes of bone marrow transplantation.

- **Maansi Bansal-Travers, PhD, MS**, Assistant Professor of Oncology in the Department of Health Behavior, received a two-year, $416,535 award from the **NCI** to assess the impact of different pharmacy tobacco retail displays on smokers' awareness, perceptions and intentions to quit smoking.

- **Emese Zsiros, MD, PhD, FACOG**, Assistant Professor of Oncology in the Department of Gynecologic Oncology, received a one-year, $73,887 grant from **X4 Pharmaceuticals Inc.** to investigate the efficacy of a new pharmaceutical agent on ovarian cancer tumor growth.

- **Hayley Affronti, BS**, a predoctoral student, received the **NCI's Predoctoral to Postdoctoral Fellow Transition Award**, a new and highly competitive grant that includes support for two years of her predoctoral research at Roswell Park. With the sponsorship of **Dominic Smiraglia, PhD**, Director of Graduate Studies for the Cellular and Molecular Biology PhD Program, Affronti will receive $59,600 for her work to test new combination therapies that accentuate metabolic strain and block a stress relief pathway in order to treat prostate cancer.

- The six one-year supplemental awards to the Institute's 2014 CCSG grant, which are intended to support the leadership, administrative and research work, were awarded to the following Roswell Park faculty members:

    - **Barbara Foster, PhD**, Professor of Oncology in the Department of Pharmacology and Therapeutics, received $749,842 for a project to enhance preclinical drug development for squamous non-small-cell lung cancer.

    - **Richard Koya, MD, PhD**, Associate Director of the Center for Immunotherapy, received $447,972 for his work in cancer immunotherapy based on new approaches for improving T cell

recognition of cancer cells.

- **Elizabeth Gage-Bouchard, PhD**, Associate Member of the Department of Cancer Prevention and Control, received $199,940 for her work examining opportunities and barriers related to cancer prevention and control.

- **Carl Morrison, MD, DVM**, Executive Director of the Center for Personalized Medicine, received $100,000 supporting his contributions to the NCI's repository of patient tumor samples, a resource that supports drug development.

- **Dr. Kunle Odunsi** received a $62,500 grant to conduct an NCI-supported immunotherapy clinical trial through the **Experimental Therapeutics Clinical Trials Network (ETCTN)**. As a member site of the ETCTN, this trial will provide our patients with increased access to immunotherapy agents under NCI development.

- **Marc Ernstoff, MD**, Senior Vice President for Clinical Investigation and Katherine Anne Gioia Chair of Medicine, received $50,000 for his work in recruiting participants to ETCTN studies.

- RPCI has again been recognized as an **Optum® Center of Excellence (COE)** in the areas of **adult and pediatric blood and marrow transplantation (BMT)**. Optum, one of the nation's largest health and wellness companies, gives this designation to medical facilities that offer outstanding clinical care with excellent patient support and patient outcomes. The BMT Center at Roswell Park has received the Optum designation each year since 2005. Roswell Park offers blood and marrow transplantation for adult and pediatric patients ages 4 to 80 who are diagnosed with blood disorders. Based on patient outcomes, Roswell Park is one of the nation's top blood and marrow transplant programs.

- An RPCI-led team has identified genetic variations in the DNA of both transplant recipients and their unrelated cell donors that were associated with poor patient outcomes. These findings provide new insights into the causes of disease relapse and may improve transplant donor selection. **Blood and marrow transplantation (BMT)** is a standard therapy used to treat leukemias and other life-threatening blood diseases. The research was recognized with a **"Best Abstract Award"** – and was the top-rated abstract voted on by abstract reviewers and conference chairs – at the annual **BMT Tandem Meeting**. The research was led by **Theresa Hahn, PhD**, of the Department of Medicine at Roswell Park and Lara Sucheston-Campbell, PhD (formerly of RPCI), of the Colleges of Pharmacy and Veterinary Medicine at The Ohio State University. The research team believes that these findings will lead to a better understanding of the biology of this disease. Additionally, they expect that this work will eventually help clinical teams identify unrelated donors with genotypes that yield better survival in transplant patients

and enhance the chances for successful blood and marrow transplants.

- **Kunle Odunsi, MD, PhD, FRCOG,** Deputy Director of RPCI, has been re-elected to the prestigious leadership position as **Co-chair of the National Cancer Institute's (NCI) Ovarian Task Force** of the Gynecologic Cancer Steering Committee. He will serve for three years. The NCI Gynecologic Cancer Steering Committee seeks to find efficient, cost-effective, science-driven and transparent processes that identify and promote the "best science" in gynecologic cancer clinical research. Their goal is to foster collaborations among international groups and institutions engaged in conducting clinical trials in gynecologic cancers. Dr. Odunsi is co-chair of the Ovarian Cancer Task Force along with Deborah Armstrong, MD, Professor of Oncology at **Johns Hopkins School** of Medicine. Dr. Odunsi also serves as the M. Steven Piver Professor and Chair of the Department of Gynecologic Oncology, Executive Director of the Center for Immunotherapy at Roswell Park. He provides operational oversight for the scientific, clinical research and educational missions of Roswell Park and monitors all research-related initiatives steering development of programs and policies designed to transfer scientific discoveries to clinical settings.

- The Centers for Disease Control and Prevention (CDC), the Advisory Committee on Immunization Practices, and the Healthcare Infection Control Practices Advisory Committee recommend that all U.S. health care workers get vaccinated annually against influenza. During the 2016-2017 Influenza Season, Roswell Park implemented an action plan resulting in a **92% influenza vaccination rate**. The CDC's most recent reporting at cdc.gov shares that in 2014-15, flu vaccination was highest (at 78.7%) among health care professionals working in hospitals, as opposed to other health care settings. While this percentage may have increased since 2014-15, Roswell Park has taken steps to stay ahead of national averages for percentage of its employees, contractors, volunteers, etc. who receive the flu shot.

- Three Roswell Park nurses were nominated for the Professional Nurses Association of WNY Annual Awards: Nurse of Distinction – **Melissa Hiscock, BSN, RN, WOCN, OCN, Enterostomal Therapy**; Nurse of Distinction in Education – **Xandora Palmisano, MSN, RN, Operating Room**; and Outstanding Staff Nurse – **Kim Peccia, AAS, RN, Gastrointestinal Surgery & Endocrine Surgery**.

- Two Roswell Park nurses were nominated by patients for ***Cure*** magazine's Extraordinary Healers award: **Renee Thompson, RN**, Amherst Infusion Center; and **Victoria Fenstermaker*, RN, Intensive Care Unit**.

- The **DAISY Award** is an international program that rewards and celebrates the extraordinary clinical skill and compassionate care given by nurses every day. RPCI is proud to be a DAISY Award Partner, recognizing one inpatient and one ambulatory nurse with this special honor every quarter. Among this year's **Daisy Award** winners were: **Victoria Fenstermaker*, AAS, RN**; **Maureen Rogers, AAS, RN**; **Christine Sheehan, AAS, RN, OCN**; and **Gale Howard, AAS, RN***. Nominations for these awards are submitted by patients and their loved ones, as well as to faculty and staff.

- **Andrew Fabiano, MD, FAANS,** Associate Professor of Oncology and Director of the Spinal Oncology Center, was named to the **25th annual Buffalo Business First "40 Under 40" class**. A luncheon was held to celebrate Dr. Fabiano and his fellow honorees in November. Dr. Fabiano came to Roswell Park in 2010 and has been an indispensable member of the team ever since. Colleagues, patients and their loved ones shared inspiring stories about Dr. Fabiano when the Institute's social media team shared the news of this honor on **Roswell Park's Facebook page**.

- For the second consecutive year, RPCI was named a winner of the **Guardian of Excellence Award**, a prestigious honor that recognizes sustained high performance in patient experience. The annual Guardian of Excellence award, given by **Press Ganey**, recognizes those who have consistently ranked in the top 5% of hospitals evaluated through the inpatient Hospital Consumer Assessment of Healthcare Providers and Systems survey, which captures patients' feedback about the inpatient care they have received. The Press Ganey Guardian of Excellence Award belongs to everyone at Roswell Park, especially those who provide **inpatient care**. This award is a recognition of the dedicated work of our nurses, clinicians, and fellows, as well as staff members in Pharmacy, Clinical Nutrition, Psychosocial Oncology, Case Management, Physical Therapy, Pastoral Care and Environmental Services, not to mention all those in administrative and clerical support roles who help the Institute maintain such a high level of inpatient care.

- **Dean Tang, PhD**, Chair of the Department of Pharmacology and Therapeutics at RPCI, has been named a **Fellow of the American Association for the Advancement of Science (AAAS)**, the world's largest general scientific society and publisher of the journal *Science*. Dr. Tang's peers selected him for his efforts in advancing of the basic understanding of tumor cell heterogeneity generated via prostate cancer stem cells, and for discovering microRNAs that negatively regulate these stem cells. Dr. Tang's research goal is to identify novel therapeutics and therapeutic combinations for personalized cancer treatment. In addition to conducting his research, Dr. Tang serves in a leadership role at Roswell Park, overseeing 15 independent research laboratories in the Department of Pharmacology and Therapeutics with the collective focus on a multidisciplinary approach to experimental cancer therapeutics. He also serves as a Graduate Faculty at UB.

- 41 physicians from RPCI are included in the **2017 Castle Connolly Medical, Ltd.** prestigious **America's Top Doctors®** list. The annual directory offered by the health care research and information company is designed to help guide consumers to America's top doctors. The list is the result of an extensive survey process of thousands of American doctors. A physician-led team of researchers then screens the physicians' education and professional experience before making final selections.

    - Roswell Park's physicians cited by specialty are:
      Clinical Genetics: Nicoleta Voian, MD, PhD
      Dermatology: Ilene Rothman, MD
      Diagnostic Radiology: Alan Klitzke, MD, FACNM
      Endocrinology, Diabetes & Metabolism: Joseph Torre, MD
      Gynecologic Oncology: Shashikant Lele, MD, FACOG; Adekunle Odunsi, MD,

PhD, FRCOG, FACOG
Hematology: Mohamed Ahmed, MD, PhD; Philip McCarthy, MD
Infectious Disease: Brahm Segal, MD
Internal Medicine: Martin Mahoney, MD, PhD
Medical Oncology: Amy Early, MD, FACP; Francisco Hernandez-Ilizaliturri, MD; Ellis Levine, MD; Tracey O'Connor, MD; Maureen Ross, MD, PhD; Frederick Hong, MD; Michael Krabak, MD, PhD
Neurological Surgery: Robert Fenstermaker, MD; Robert Plunkett, MD
Neurology: Laszlo Mechtler, MD, FAAN, FASN
Nuclear Medicine: Dominick Lamonica, MD
Orthopaedic Surgery: Brian McGrath, MD
Otolaryngology: Wesley Hicks, Jr., MD, FACS
Pain Medicine: Oscar DeLeon, MD
Pediatric Cardiology: Glenn Leonard, MD*
Pediatric Hematology-Oncology: Steven Ambrusko, MD, MS; Barbara Bambach, MD; Meghan Higman, MD, PhD; Denise Rokitka, MD, MPH
Radiation Oncology: Michael Kuettel, MD, PhD, MBA; Dheerendra Prasad, MD, MCh, FACRO; Anurag Singh, MD
Surgery: Ronald Bauer, MD; Steven Hochwald, MD, FACS; John Kane, III, MD, FACS; Boris Kuvshinoff, II, MD, MBA
Thoracic & Cardiac Surgery: Mark Hennon, MD, FACS; Chukwumere Nwogu, MD, PhD, FACS; Anthony Picone, MD, PhD, MBA
Urology: Khurshid Guru, MD; Eric Kauffman, MD; James Mohler, MD; Thomas Schwaab, MD, PhD

- The architecture firm that brought the Scott Bieler Clinical Sciences Center to life on the RPCI campus was honored for its efforts. **FXFOWLE** received the **Buffalo/WNY Architecture Awar**d at the 2016 awards gala of AIA Buffalo/WNY, the regional chapter of the **American Institute of Architects**. The award, recognizing the firm's work on the 11-story clinical care facility, is the highest honor given by the chapter.

- **Laurie Flury, MSN, RN, NP**, was honored with the **2017 Distinguished Alumni Award** from **Erie Community College**. After starting her Roswell Park career in 2005 in Bone Marrow Transplant, she is now a Nurse Practitioner in the Intermediate Care and Intensive Care units. Laurie's genuine interest in health and prevention has influenced her to be active in the community. While a student at ECC, Laurie organized the first Dreams from the Heart Camp walk. Laurie has also been inspired by her work with patients to raise money for cancer research. She finished her first Ride For Roswell in 2016, and plans to complete the 65-mile route this year. As a personal health enthusiast, Laurie was not only motivated to pursue a career in nursing, but also leads a healthy lifestyle on her own. She shows a great example of the importance of health awareness, and tries to carry that ideology through her work.

- **David Scott**, Director of the Office of Diversity and Inclusion, was honored with a **Global Diversity Leadership Award** by the **World HRD Congress**. The honor was bestowed during the 25th Silver Jubilee meeting of the organization. Mr. Scott was honored for expanding career opportunities for people from underserved groups and for enhancing the culture of inclusion at RPCI. Described as "a thinker and a doer" and as "a role model

and a believer in change," Mr. Scott is dedicated to building an increasingly diverse workforce at Roswell Park, expanding employment and contracting opportunities for minorities and underserved groups through outreach programs, job fairs, job-training events and paid internship programs.

- Researchers at RPCI received **$2.77 million** in new funding from federal agencies, the Breast Cancer Research Foundation and the Roswell Park Alliance Foundation, for projects to advance cancer research and treatment.

    - Two Roswell Park researchers were awarded competitive grants from federal agencies:

        - **James Mohler, MD**, Associate Director, Senior Vice President for Translational Research and Chair of Urology, received a three-year, $660,315 award from the **Department of Defense Prostate Cancer Research Program** for a project that aims to determine the pathways prostate cancer uses to produce its own growth hormones that allow the cancer to survive and grow in spite of standard hormone therapy.

        - **Eugene Kandel, PhD**, Assistant Professor of Oncology in the Department of Cell Stress Biology, received a two-year, $174,100 grant from the **National Cancer Institute (NCI)** for his work to determine which genes control a cancer cell's sensitivity to oxygen and nutrient deprivation.

    - **Christine Ambrosone, PhD**, Professor of Oncology and Senior Vice President of Population Sciences, and **Chi-Chen Hong, PhD**, Associate Professor of Oncology in the Department of Cancer Prevention and Control, received a one-year, $250,000 grant from the **Breast Cancer Research Foundation** for a project that aims to study why some women are more likely than others to develop aggressive breast tumors that lack the estrogen receptor and have poorer outcomes.

    - **The Roswell Park Alliance Foundation**, the nonprofit organization that raises funds and manages donations to RPCI, awarded 32 research projects a total of **$1.69 million**:

        - **Kunle Odunsi, MD, PhD, FRCOG, FACOG**, Deputy Director, Chair and M. Steven Piver Professor of Gynecology Oncology and Executive Director of the Center For Immunotherapy, received $300,000 for "PHI pilot of personalized peptide vac and polyic-LC with FLT3 ligand."

        - **Anurag Singh, MD**, Professor of Oncology in the Department of Radiation Medicine, received $50,000 for the project "Utilizing radiation to enhance the immune response in squamous cell carcinoma of the head and neck" and an additional $25,000 to study the "Use of radiation to enhance immune response in lung cancer."

- **Joseph Skitzki, MD, FACS**, Associate Professor of Oncology and Chair of the Melanoma/Sarcoma Disease Site Research Group, received $50,000 for the project “Melanoma DSRG-PDX resource.” Dr. Skitzki will also be lead researcher on “Investigation into the efficacy of the curaxin (CBL0137) for metastatic lung sarcoma,” a project awarded $25,000.

- **Yuesheng Zhang, MD, PhD**, Professor of Oncology and member of the Chemoprevention and Genitourinary cancers programs, received $50,000 for the project “Preclinical evaluation of recombinant human protein against cetuximab resistant colorectal tumors" and $20,000 to study the “Role of PEPD in regulating p53 and antagonizing ERBB1/ERBB2.”

- **Moshim Kukar, MD**, Assistant Professor of Oncology in the Department of Surgical Oncology, received $71,215 for “Double arm study of pyloric drainage procedure for minimally-invasive esophagectomy.”

- **Gokul Das, PhD**, Associate Professor of Oncology in the Department of Pharmacology and Therapeutics, received $50,000 for the project “Estrogen receptor beta-p53 signaling axis: a new therapeutic against triple-negative breast cancer.”

- **Sai Yendamuri, MD, FACS**, Professor of Oncology and Chair of the Department of Thoracic Surgery, received $50,000 for the project “Comparison of molecular characteristics and therapeutic response of esophageal adenocarcinoma with corresponding patient derived models of cancer.”

- **Renuka Iyer, MD**, Professor of Oncology and Co-Director of the Liver and Pancreas Tumor Center, received $50,000 for the project “Hepatic artery infusion FACT complex targeting drug CBL0137 on hepatocellular carcinoma.”

- **Anna Woloszynska-Read, PhD**, Assistant Professor of Oncology in the Department of Pharmacology and Therapeutics, received $50,000 for the project “Neoadjuvant epigenetic therapy with oral decitabine/tetrahydrouridine in patients with transitional cell carcinoma of the bladder undergoing a cystectomy.”

- **Eric Kauffman, MD**, Assistant Professor of Oncology in the Department of Urology, received $50,000 for the project “Decoding the molecular and cellular landscape of the metastatic small renal tumor.”

- **Kent Nastiuk, PhD**, Assistant Professor of Oncology in the departments of Cancer Genetics and Urology, received $50,000 for the project “Adaptive therapy resistance in prostate cancer patients receiving

androgen deprivation plus radiation therapies."

- **Kirsten Moysich, PhD, MS**, Distinguished Professor of Oncology in the Department of Cancer Prevention and Control, received $50,000 for the project "A feasibility study of the role of the oral, vaginal and gastrointestinal microbiomes in ovarian cancer prognosis."

- **George Chen, MD**, Assistant Professor of Oncology, received $50,000 for the project "Is the epithelial to mesenchymal transition a new pathophysiologic mechanism for chronic GvHD?"

- **Kara Kelly, MD**, Professor and Chair of Pediatric Oncology, and **Elizabeth Gage-Bouchard, PhD**, Associate Professor in the Department of Cancer Prevention and Control, received $50,000 to support the project "A comprehensive assessment of oral chemotherapy adherence in pediatric ALL."

- **Junko Matsuzaki, PhD**, Assistant Professor in the Center for Immunotherapy, together with **Dr. Odunsi**, received a $50,000 grant for the research project "Development of the most effective adoptive T cell therapy platform utilizing CD4+ T cells."

- **Toru Ouchi, PhD**, Professor in the Department of Cancer Genetics, received a $50,000 grant for the project "Regulating Cancer Susceptibility by Metabolic and Radiation Oxidative Stress by A Novel H2AX Function."

- **Kevin Eng, PhD**, Assistant Professor in the Department of Biostatistics and Bioinformatics, received $50,000 to support the project "The Familial Ovarian Cancer Update Study (FOCUS)."

- **Jianmin Zhang, PhD**, Assistant Professor in the Department of Cancer Genetics, received a grant of $50,000 to support his project "The dysfunction of hippo pathway effector-TAZ in breast cancer."

- **David Goodrich, PhD**, Professor in the Department of Pharmacology and Therapeutics and **Grace Dy, MD**, Chief of Thoracic Oncology and Associate Professor in the Department of Medicine, received $50,000 to support the project "Histologic transformation mediates NSCLC resistance to EGFR TKI therapy."

- **Lynda Beaupin, MD**, Assistant Professor in the Department of Pediatric Oncology, and **Megan Pailler, PhD**, of the Department of Psychosocial Oncology, received $50,000 for the project " 'Talking Pictures': an exploratory study of a meaning-based social media intervention for AYA cancer."

- **Joseph Barbi, PhD**, and **Yasmin Thanavala, PhD**, both from the Department of Immunology, received $50,000 to support the project "VEGF signaling and neuritin favor an activated T-reg phenotype in HCC patients."

- **Renuka Iyer, MD**, Professor of Oncology, received $50,000 for "Hepatic artery infusion of FACT complex targeting drug CBL0137 on hepatocellular carcinoma."

- **Michael Nemeth, PhD**, Assistant Member in the Department of Medicine, received $50,000 for the project "Induction of cell cycling by interferon alpha to enhance decitabine response in myelodysplastic syndrome."

- **Jenny Gu**, Translational Research Scientist, received $50,000 for the project "Metformin as a novel chemotherapeutic agent for the treatment of diffuse large b-cell lymphoma."

- **Eugene Yu, PhD**, Professor in the Department of Cancer Genetics, received $48,000 for the project "Engineer the first model to reveal the aneuploidy independent of gene dosage in tumorigenesis."

- **James Mohler, MD**, Associate Director and Senior Vice President for Translational Research, received $27,675 for the project, "Support for BMPK members to develop approaches to measure metabolites."

- **Pamela Hershberger, PhD**, Associate Professor of Oncology in the Department of Pharmacology and Therapeutics, received $25,000 for the project "Impact of vitamin D on stromal architecture in non-small cell lung cancer."

- **Joyce Ohm, PhD**, Associate Professor of Oncology in the Department of Cancer Genetics, received $25,000 for the project "Identification of new molecular therapeutics for the translocation associated soft tissue sarcomas."

- **Dean Tang, PhD**, Professor of Oncology and Chair of the Department of Pharmacology and Therapeutics, received $20,000 to study the "Role of neurogenesis genes in regulating cancer stem cells and tumor differences."

- An accomplished urologic oncologist and longtime senior leader at RPCI was surprised with an incredible distinction at the **National Comprehensive Cancer Network (NCCN) Annual Conference**. **James Mohler, MD**, Associate Director and Senior Vice President for Translational Research, Chair of the Department of Urology, and Professor of Oncology at RPCI, received the **2017 Rodger Winn Award** at the NCCN 22nd Annual Conference held in Orlando, Fla. Dr. Mohler has served as chair of the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines) Panel for Prostate Cancer since 2005.

He also serves on the NCCN Guidelines Panel for Prostate Cancer Early Detection and the editorial board of ***JNCCN – Journal of the National Comprehensive Cancer Network***. He has served on the NCCN Board of Directors and NCCN Guidelines Steering Committee, and is also Professor of Urology at the Jacobs School of Medicine and Biomedical Sciences at the University at Buffalo and Adjunct Professor of Urology at UNC-Lineberger. Named for the so-called "father" of the NCCN Guidelines program, the Rodger Winn Award is presented to a faculty member who embodies Dr. Winn's enthusiasm, love of life, and dedication and commitment to the development of evidence-based guidelines tempered by expert judgment. The award recognizes service in the development of NCCN Clinical Practice Guidelines, promotion of collegiality in NCCN activities, commitment to excellence, and dedication to multidisciplinary care.

Clinical & Scientific Achievements

- Under the leadership of **Candace S. Johnson, PhD, President and CEO**, RPCI recruited several high-profile oncologist/researchers, including **Kazuaki Takabe, MD, PhD, FACS**, who assumed the role of Clinical Chief of Breast Surgery; **Clare Twist, MD**, who assumed the role of Director of Pediatric Experimental Therapeutics; and **Dean Tang, PhD**, who assumed the role of Chair of the Department of Pharmacology & Therapeutics. In addition, RPCI retained **Pallawi Torka, MD**, who joined the Institute's faculty after serving as the Chief Administrative Hematology Fellow in 2015-16.

- Effective April 1, RPCI welcomed **Marc Ernstoff, MD**, as Professor and Chair of the Department of Medicine, Senior Vice President for Clinical Investigation and The Katherine Anne Gioia Chair of Medicine. Dr. Ernstoff serves as a respected colleague and collaborator, providing leadership and inspiration in every arena – clinical, academic and research. Dr. Ernstoff came to Roswell Park from Cleveland Clinic's Taussig Cancer Institute where he served as the director of the Melanoma Program. His clinical research is focused on the treatment of melanoma and genitourinary cancers.

- Also in April, RPCI welcomed **Stephen Edge, MD, FACS, FASCO**, back to the Institute as Vice President, Healthcare Outcomes and Policy in the Departments of Surgical Oncology and Cancer Prevention and Control. He returned after a three-year appointment as Cancer Center Director at Baptist Cancer Center in Memphis, TN. Dr. Edge is active in breast cancer research, in techniques of surgery and sentinel lymph node biopsy. He is also active in efforts to define and improve the quality of cancer care for breast and other types of cancer. His work involves research with large cancer registry programs and linking those registries to other sources of cancer treatment information.

- **Vishala Neppalli, MD**, accepted the appointment as Roswell Park's Chief of Diagnostic Hematology. Dr. Neppalli is Roswell Park's physician leader over the management of Diagnostic Hematology, which is a division within the Department of Pathology and Laboratory Medicine. She works closely with Roswell Park's oncologists and **Marc Ernstoff, MD**, to oversee the alignment of Pathology with Medical Hematology. Dr. Neppalli serves as a bridge builder among specialties, facilitating communication among

teams. Her work leads to streamlined processes and faster diagnoses for Roswell Park's patients.

- **John Krolewski, MD, PhD,** was promoted from Interim Chair to Chair of the Department of Cancer Genetics and Genomics. He also serves as Co-Leader of the Genetics and Genomics Cancer Center Support Grant (CCSG) Program. Dr. Krolewski joined the Roswell Park faculty in 2015 as a Professor of Oncology within the Center for Personalized Medicine and the Department of Cancer Genetics. He brings a great mix of leadership, inspiration, operational experience and scientific excellence to this position.

- Roswell Park welcomed **Mr. Bryan Wittmeyer, MSPT**, as the Director of **Rehabilitation Therapy** and **Wellness Services**. He came to RPCI from QuadMed and Greater Buffalo Physical Therapy and is uniquely qualified to fulfill the responsibilities of this role. He holds both a Master of Science in Physical Therapy degree and a Bachelor of Science degree in Rehabilitation Services from Northeastern University. Mr. Wittmeyer has more than ten years of experience in Rehabilitation Therapy, several of those in a leadership role. The depth and breadth of his career and expertise make him a well-qualified addition to RPCI.

- RPCI became the first American cancer center and only the second institution in the U.S. to implement Elekta's new **Leksell Gamma Knife Icon radiosurgery system**, which expands the range of conditions that can be treated through Gamma Knife radiosurgery and gives more patients an option for cognition-sparing treatment of brain disorders. For patients with certain types of brain tumors or brain metastases, this high-precision, minimally invasive radiation therapy serves as an effective alternative to neurosurgery or conventional radiation therapy. The Gamma Knife Center at RPCI is the only facility in Western New York to offer Gamma Knife radiosurgery. More than 400 patients annually receive Gamma Knife treatments at Roswell Park, which has treated more than 5,000 patients since this program was initiated in 1998.

- A study from RPCI and the **University at Buffalo** reports that post-menopausal women who use metformin long-term for the treatment of diabetes may be at lower risk for developing certain cancers and dying from these diseases. The research effort was led by **Zhihong Gong, PhD**, Assistant Professor of Oncology in the Department of Cancer Prevention and Control at RPCI, and **Jean Wactawski-Wende, PhD***, one of the principal investigators of the **Women's Health Initiative** and Dean of the School of Public Health and Health Professions at UB. The team's findings were published in the ***International Journal of Cancer***.

- Researchers from RPCI and **Columbia University's Mailman School of Public Health** found that lay health advisors who share similar social, economic, cultural and linguistic backgrounds and values with the medically underserved groups they interact with have been shown to reduce health disparities. Looking to identify elements that can help make these advisors and the programs they support as effective as possible, researchers found that support from the sponsoring organization and clear role expectations are critical for the success of these lay advisors. The study is one of the largest to date involving African-American lay health advisors. The findings were published in the

journal ***Implementation Science***. **Deborah Erwin, PhD**, Director of the Office of Cancer Health Disparities Research, is senior author of the study.

- As new laws and regulations concerning **electronic cigarettes** emerge, the **Health Behavior** team at RPCI has become a leading source of information, conducting experiments and analyses that answer many important questions about these devices, their emissions and their impact on health. Roswell Park research has proven that e-cigarettes are not emission-free, various flavors of e-cigarettes may contain higher levels of respiratory irritants and third-hand nicotine residue can be detected from electronic cigarettes. National and international consumer publications have reported on the work being done at RPCI. In May 2016, **BBC's "Horizon" documentary series** featured Roswell Park experts, **Mark Travers, PhD**, Research Scientist in the Department of Health Behavior, and **Maciej Goniewicz, PhD, PharmD**, Associate Professor of Oncology in the Department of Health Behavior, and their research on e-cigarettes and their impact on both vapers and those around them.

- As robot-assisted surgery changes the traditional interrelationships of surgical teams with the technology around them in the operating room, new opportunities arise for understanding and optimizing operating-room processes. In a series of three studies, researchers from RPCI and the **University at Buffalo** examined the dynamics of the robot-equipped operating room, sharing findings they hope can be used to streamline workflows and improve patient care. The studies are a collaborative effort of the **Applied Technology Laboratory for Advanced Surgery (ATLAS)** program at RPCI and human factors faculty and students in the Department of Industrial and Systems Engineering within the UB School of Engineering and Applied Sciences. The latest paper in the series, published online and in print by the ***Journal of Surgical Education,*** documents the team's efforts to design an approach for accurately capturing team communications and activities during robot-assisted surgery. **Khurshid Guru, MD**, Director of Robotic Surgery and Professor of Oncology at Roswell Park, was lead author on the three papers.

- Biomedical research in culturally distinct communities is often a challenge. With the goal of honoring Native Nations' sovereignty and benefiting future generations while **reducing health disparities**, a Roswell Park-led study offered some strategies to improve clinical trial recruitment and participation in biospecimen collection for cancer research among Native Americans. The study was published online ahead of print in the ***Journal of Cancer Education.*** According to **Rodney Haring, PhD, MSW**, assistant professor of oncology in the Office of Cancer Health Disparities Research at Roswell Park this research focused on the voices, insights, experiences and perceptions of urban Native American communities that will improve recruitment for cancer and other health-related clinical trials. The responses from the Native communities provide useful information for building respectful partnerships and successful clinical trial recruitment that will move science forward. An enrolled member of the Seneca Nation, Dr. Haring also serves as a tribal delegate on the U.S. Department of Health and Human Services, Health Research Advisory Council.

- New research from RPCI offers clinicians treating patients with advanced liver cancer a way of determining which patients may benefit most from the **targeted therapy** sorafenib. This study was the first to demonstrate the potent immunotherapeutic benefits of sorafenib and to suggest that this targeted treatment may extend survival among a subset of patients with liver cancer, according to the paper's senior author, **Yasmin Thanavala, PhD**, Professor in the Department of Immunology and Member of the Tumor Immunology and Immunotherapy program at Roswell Park. Study results indicate that patients with an increased number of cells expressing the checkpoint molecule PD-1 before treatment are more responsive to sorafenib therapy. These increased numbers in pretreatment blood samples may be a biomarker indicating which patients will respond better to therapy and may help to predict overall patient survival. This research was highlighted in a press release from the journal ***JCI Insight***.

- The **Department of NRG Oncology Statistical and Data Management Center (SDMC)** transitioned to a division under the Department of Biostatistics and Bioinformatics. As the chair of the Department of Biostatistics and Bioinformatics, **Alan Hutson, PhD**, now oversees all activities of the SDMC.

- Roswell Park's **Assessment & Treatment Center (ATC)** expanded to "extended hours" operations in April 2016, adding weekend day hours. Check-in was located in the Radiation Medicine area. Then, the following March, the ATC moved to its new home in the former Gynecologic Oncology Center (2nd Floor Main Hospital), and further expanded its hours to weekdays from 9 a.m . - 9 p.m., with the last patient intake at 8:30 p.m., and weekends from 9 a.m. - 5 p.m., with the last patient intake at 4:30 p.m. The center is staffed by the RPCI Nursing Team and MASH physicians, with additional support from nurse triage staffing. One of the primary goals of the ATC is to decompress Roswell Park's Ambulatory Centers. When appropriate, Centers are able to transfer sick walk-in patients to the ATC, reducing scheduled patient wait times. Another goal of the ATC is to reduce admissions to outside emergency departments and hospitals by providing patients with improved access to Roswell Park. ATC team members encouraged cross departmental collaboration, inviting internal colleagues to an Open House one month after moving in to their new location.

- When it comes to sharing experiences caring for a child with cancer, parents often turn to social media as a way to connect with support. Those are the findings of new research led by RPCI researchers and published online ahead of print by the journal ***Cancer Nursing***. Little research has systematically studied how people use social networking sites when confronting serious illness, according to the paper's first author, **Elizabeth Gage-Bouchard, PhD**, Associate Member of Cancer Prevention and Control at Roswell Park. This study shows that personal Facebook pages offer a platform for cancer caregivers to share their cancer-related experiences, promote advocacy and awareness and mobilize social support, according to **Lynda Kwon Beaupin, MD**, Assistant Professor of Oncology in the Department of Pediatric Oncology. Researchers examined personal Facebook pages of parents of children with Acute Lymphoblastic Leukemia, a form of childhood cancer, from May 2012 to May 2013.

- RPCI research on the most potent form of vitamin D, commonly called calcitriol, offers new insights into approaches that may enhance the antitumor activity of this much-studied human hormone. **Wei Luo, MD, PhD**, a translational research scientist in the Department of Pharmacology and Therapeutics at Roswell Park, is the first author and **Candace S. Johnson, PhD**, President and CEO of the Institute, is the senior author of "Delineation of novel CYP24A1 transcriptional regulators." The results of this research were presented at the **2016 American Association for Cancer Research (AACR) Annual Meeting**.

- New insights on age-related diseases may hold the key to both delaying aging and, in the process, reducing the occurrence of diseases including cancer. These findings have been reported by a team from RPCI and **Everon Biosciences** in the journal ***Aging***. According to the study's senior author **Andrei Gudkov, PhD, DSci**, Senior Vice President for Basic Science at Roswell Park, the majority of aging theories agree that chronic inflammation associated with secretions by senescent, or aging, cells are the underlying cause of frailty and of multiple age-related diseases, including cancer. This study has redefined a subset of these cells as belonging to the category of macrophages. This finding requires a re-interpretation of the mechanisms underlying these cellular targets and a reconsideration of their potential for anti-aging treatments. Scientists have named the subtype "senescence-associated macrophages," or SAMS.

- Two previously unrecognized genetic markers may predict whether breast cancer patients would benefit from chemotherapy followed by tamoxifen, according to preclinical research from RPCI in collaboration with the cooperative research group **SWOG** and **St. Jude Children's Research Hospital**. **Victoria Larsen***, a Howard University undergraduate doing research at Roswell Park, is the first author and **Song Yao, PhD**, Associate Professor of Oncology also in the Department of Cancer Prevention and Control at Roswell Park, is the senior author of "Germline genetic variants in GATA3 and breast cancer treatment outcomes in SWOG 8897 trial." The results of this research were presented at the **2016 American Association for Cancer Research (AACR) Annual Meeting**.

- Roswell Park upgraded it **pneumatic tube system**. Each upgraded station includes a new operator touch screen.

- Unlocking the power of patient data and connecting health care information to improve patient care were two topics that were presented by information technology experts from RPCI at the annual **Allscripts Client Experience** conference. Roswell Park's multidisciplinary approach to information technology optimizes the use of electronic health records and other clinical information technology to improve the quality, safety, reliability and efficiency of our clinical workflows in the care of patients, shared **Everett Weiss, MD**, Chief Medical Information Officer. At the conference, **Lou Kruszka**, a Senior System Analyst with the Information Technology (IT) Department, highlighted how Roswell Park is using internal and external data in a Corporate Performance Management (CPM) reporting system to satisfy American College of Surgeons National Surgical Quality Improvement Program reporting requirements. In addition to Mr. Kruszka's presentation, Dr. Weiss joined IT team members **Kristine George**, Senior

Business System Analyst, **Christopher Dahl**, Senior Systems Analyst, and **Marlene Denis**, Senior Business Systems Analyst, in offering the panel discussion "Novel Approaches to the Transformation and Optimization of Ambulatory Patient Care Workflows." This presentation outlined how Roswell Park crafted an end-user-driven approach to reconfiguring the electronic health record (EHR) system to align with ambulatory patient care workflows and optimize clinical provider adoption and use of the EHR while simultaneously improving several key performance benchmarks.

- Construction began on the new space for Roswell Park's **Katherine, Anne & Donna Gioia Pediatric Hematology Oncology Center**.

- Excessive inflammation contributes to a variety of diseases, including cancer. The class of molecules known as resolvins appears to modify disease progression by decreasing inflammation, offering a potential therapeutic option, according to a review article published in the ***World Journal of Clinical Cases*** and co-authored by **Kazuaki Takabe, MD, PhD, FACS**, Clinical Chief of Breast Surgery at RPCI. Resolvins are produced when the body metabolizes omega-3 fatty acids, which are found naturally in fish oil and vegetable oil. The scientists examined a number of studies evaluating the role of these molecules in reducing acute and chronic inflammation, which has been associated with diseases including gastroenteritis, hepatitis, diabetes, neurological diseases and cancer. Given their unique function with minimal side effects, resolvins could represent a new class of anti-inflammatory drugs, shared Dr. Takabe. The authors note that further study will be required in order to develop therapies that take advantage of this anti-inflammatory capability of resolvins.

- Researchers at RPCI in collaboration with investigators from the cooperative group **SWOG**, have found that use of multivitamins prior to diagnosis may reduce the risk of neuropathy in breast cancer patients treated with the class of drugs known as taxanes. **Gary Zirpoli, PhD***, a Postdoctoral Fellow with RPCI's Department of Cancer Prevention and Control, is the first author and **Christine Ambrosone, PhD**, Chair of that department and Senior Vice President for Population Sciences, is the senior author of "Supplement use and chemotherapy-induced peripheral neuropathy in breast cancer patients treated on a SWOG study SO221." The results of this research were presented at the **2016 American Association for Cancer Research (AACR) Annual Meeting**.

- New research from RPCI shows that promising cancer drugs used in combination can have significant therapeutic impact on a particularly aggressive subtype of diffuse large B-cell lymphoma (DH-DLBCL) in preclinical studies. **Priyank Patel, MD***, a fellow in the Department of Medicine at Roswell Park, is the first author and **Francisco Hernandez-Ilizaliturri, MD**, Clinical Chief of the Institute's Lymphoma/Myeloma Service, is the senior author of "Investigating novel targeted therapies for double hit diffuse large B-cell lymphoma (DH-DLBCL)." The results of this research were presented at the **2016 American Association for Cancer Research (AACR) Annual Meeting**.

- RPCI researchers are investigating agents that target and disrupt the trafficking of monoclonal antibodies in multiple myeloma, a cancer of the bone marrow. **Kaitlyn Dykstra, PhD**, a postdoctoral fellow in the Department of Medicine at Roswell Park, is

the first author and **Sarah Holstein, MD, PhD**, Adjunct Associate Professor of Oncology in that department, is the senior author of "Determination of Rab GTPase-mediated pathways critical for the anti-myeloma activity of Rab GGTase inhibitors." The results of this research were presented at the **2016 American Association for Cancer Research (AACR) Annual Meeting**.

- According to a study conducted by an international research team led by RPCI, for smokers who are addicted to alcohol, chronic alcohol abuse may increase the rate of nicotine metabolism and contribute to poor smoking cessation rates. The research was a collaboration of scientists from Roswell Park, the **University of California**, **San Francisco**, and the **Medical University of Silesia and Center of Addiction Treatment** in Poland. The information, published in the journal ***Drug and Alcohol Dependence,*** may inform future smoking cessation interventions among heavy alcohol users. **Maciej Goniewicz, PhD, PharmD**, Assistant Professor of Oncology in the Department of Health Behavior is senior author on the study.

- Improper functioning of the mitochondria, a cell's source of energy, may help account for the fact that African-American men with prostate cancer respond poorly to the same conventional therapies provided to Caucasian-American men, according to research led by **Dhyan Chandra, PhD**, Associate Professor of Oncology in the Department of Pharmacology and Therapeutics at RPCI. The study was published online ahead of print in the ***British Journal of Cancer***.

- As of June 2016, 97% of RPCI employees had attended **Roswell Care Training**. In these trainings, employees were asked to reflect on what they could do differently to improve the service they provide patients and their loved ones. Employees then received practical tips on how to improve day-to-day interactions with both colleagues and patients. Role playing exercises encouraged employees to put themselves in another's shoes to get an idea of how every action, whether big or small, makes a difference.

- Adoptive T cell therapy, which involves the expansion and infusion of a patient's own immune cells, has emerged as a promising treatment for patients with metastatic melanoma, but efforts to apply these advances clinically have been limited by difficulties in obtaining long-lasting T cells that can survive following infusion. A team of researchers from RPCI, the **University of Michigan** and **Kyoto University** reported significant progress in this area, achieving the first successful generation of pluripotent stem cells from melanoma-targeting T cells in a preclinical study, results of which were published in ***Cancer Research***, a journal of the American Association for Cancer Research. A team led by **Fumito Ito, MD, PhD**, Assistant Professor of Oncology in the Department of Surgical Oncology at Roswell Park, established a preclinical model for developing and evaluating these iPS cell-derived T cells.

- In an effort to better support the Institute's many audiences 24 hours a day, 7 days a week, switchboard operations transitioned to a new model, known as the **Central Access Center**. This center includes cancer information specialists and nurse triage staff.

- Scientists at RPCI have developed a new approach to address health issues among Native Americans. The effort was led by **Rodney Haring, PhD, MSW**, Assistant Professor of Oncology in the Office of Cancer Health Disparities Research, and bridges the development of employee assistance programs (EAP) and disease management toward the goal of reducing the risk for obesity-related cancers among indigenous and Native American populations. A research article highlighting the development of this tool appears in the ***Journal of Indigenous Wellbeing***. The culturally sensitive module features units on obesity-related cancer warning signs, diet and physical activity guidance, stress management, goal setting and links users to appropriate resources.

- Several key appointments were made: **Linda Hubbard, MS, RN**, was appointed to the position of Director, Ambulatory Nursing Services; **Kathryn Hineman** was promoted to Deputy General Counsel; **Karen Sniadecki** was appointed Department Administrator III for the Surgical Departments at RPCI; **Cheri Gajewski, MSN, RN, OCS**, was appointed Director of Patient Care Services; **Julia Shutt, MSN, RN, OCN**, was promoted to Nurse Administrator of Roswell Park's Assessment and Treatment Center and Resource Pool.

- Scientists at RPCI report that even 30 minutes of exercise per week has the potential to significantly reduce a woman's risk of developing cervical cancer. According to **J. Brian Szender, MD, MPH**, lead author of the study and a fellow in the Department of Gynecologic Oncology at RPCI, this is the first U.S.-based study looking at the associations between physical inactivity and cervical cancer, and the findings suggest that abstinence from regular physical activity is associated with increased odds of cervical cancer. The case-control study was published in the ***Journal of Lower Genital Tract Disease***. **Kirsten Moysich, PhD, MS**, Distinguished Professor of Oncology in the Department of Cancer Prevention and Control at RPCI, is senior author of the study.

- RPCI ushered in a new chapter of its history with the opening of the **Scott Bieler Clinical Sciences Center** on its main campus. The 11-story, 142,000-square-foot facility adjacent to and accessible from the Roswell Park main hospital is dedicated to targeted clinical programs and support services. The building is the first clinical expansion on the Roswell Park campus in nearly two decades, and enables expansion of programs and services across every area of the comprehensive cancer center's operations.

  The $50.5 million construction project benefitted from support from every corner and segment of the community. Early on, **Sen. Charles Schumer**, **Rep. Brian Higgins** and **Buffalo Mayor Byron Brown** led the way in securing **New Market Tax Credits** for the project — advocacy that translated to $6.3 million toward the construction of the building, thanks to the participation of **Chase, Dudley Ventures**, the **National Development Council** and **Building America**.

  Two-thirds of the funds for the Scott Bieler Clinical Sciences Center — more than $32 million — was realized through donations from community members through the **Making Room to Save Lives** campaign, chaired by **Donna Gioia** and **Scott Bieler**, that exceeded its goal by over $4 million, and this success is credited to the support of the entire community, including the "Circle of Ten," who grew into a **"Circle of Fifteen"**

million-dollar donors. In addition, over **500 individuals, corporations, foundations**, organizations and Roswell Park faculty and staff stepped forward to contribute.

Every floor of the building features artwork from both well-known and emerging artists from the Western New York region, a collection curated by the **Art Committee of the Roswell Park Alliance Foundation** and made possible through generous donations. A contribution from **New York Energy Research & Development (NYSERDA)** enabled implementation of energy-conserving measures throughout the Center.

Following the grand opening, various care centers opened within the new building:

- A **Breast Oncology Center** that offers the latest approaches for risk management and the diagnosis, treatment and monitoring of benign and malignant breast tumors.

- A **Breast Imaging Center** offering screening and diagnostic mammography, ultrasound and stereotactic biopsy, with capacity to provide 10,000 additional screening mammograms annually.

- An expanded **Chemotherapy & Infusion Center** that doubles the capacity of the existing center. It features both private rooms and spaces where patients can interact, and every infusion bay looks out on scenic views of the city.

- A **Gynecology Center** that offers advanced screening approaches and cutting-edge therapies for all cancers of the female reproductive system. With the Breast Oncology and Breast Imaging centers, the Gynecology Center makes up a comprehensive Women's Health Center for the prevention, diagnosis and management of breast and gynecologic cancers.

- The Scott Bieler Clinical Sciences Center is also home to two new centers dedicated to meeting the long-term needs of patients who are no longer in active treatment. The **Survivorship & Supportive Care Center** and the **Adolescent & Young Adult Center** provide supportive care such as nutritional services, complementary care, psychosocial services, screening, pain management and palliative care for patients of all ages.

- Only 12% of kidney cancer patients with advanced disease survive five years after their initial treatment. In a RPCI-led study, scientists report that some patients with advanced kidney cancer who continued to receive a novel immunotherapy drug after their disease progressed saw clinical benefit. According to **Saby George, MD, FACP**, Associate Professor of Oncology in the Department of Medicine at RPCI and first author on the paper, analysis from this study demonstrates that continuing immunotherapy treatment after disease progression is safe and may lead to prolonged patient survival. The research was published online ahead of print in ***JAMA Oncology***, a journal of the American Medical Association.

- Researchers from the **Center for Immunotherapy** at RPCI reported that women with certain types of HLA may have an increased risk of ovarian cancer and may also respond

better to immunotherapy. The study was published online ahead of print in the journal, ***Gynecologic Oncology***, and was led by **Kunle Odunsi, MD, PhD, FRCOG, FACOG**, Deputy Director and the M. Steven Piver Professor and Chair of the Department of Gynecologic Oncology. Dr. Odunsi is also Executive Director of the Center of Immunotherapy at Roswell Park. The study's lead author is **J. Brian Szender, MD, MPH**, a fellow in Roswell Park's Department of Gynecologic Oncology.

- **Marc Ernstoff, MD**, Chair of the Department of Medicine and Senior Vice President for Clinical Investigation at RPCI, co-authored the clinical practice guidelines for melanoma within a new edition of a global medical oncology training reference guide. **The European Society for Medical Oncology (ESMO)** and the **American Society of Clinical Oncology (ASCO)** recently issued the 2016 edition of **the ESMO/ASCO Recommendations for Global Curriculum in Medical Oncology**. The curriculum offers a global perspective of the clinical training required for physicians to qualify as medical oncologists. Dr. Ernstoff collaborated with Olivier Michielin, MD, Department of Oncology, Melanoma Clinic, **Swiss Institute of Bioinformatics Lausanne**, Switzerland, on the melanoma guidelines.

- Low levels of vitamin D may be impacting survivors of childhood cancer and contributing to their long-term health issues following cancer treatment, say researchers at RPCI in new research published in the ***International Journal of Cancer Therapy and Oncology***. According to **Denise Rokitka, MD, MPH**, Assistant Professor in the Department of Pediatric Oncology and Director of the Long-Term Follow-up Clinic at Roswell Park, identifying vitamin D levels in childhood cancer survivors is critically important, because optimizing these levels may help prevent secondary cancers and chronic disease. For this **National Cancer Institute-supported** study, Dr. Rokitka and colleagues performed a cross-sectional medical chart review of 139 patients seen in the Long-Term Pediatric Follow-Up Clinic at Roswell Park from 2009 to 2014 to determine the prevalence of vitamin D deficiency among adult survivors of childhood cancers. Dr. Rokitka hopes that future studies will help clarify Vitamin D's role in prevention and health maintenance for these survivors and determine the extent to which vitamin D supplements can improve outcomes.

- An immune-based therapy developed at RPCI is moving forward with its third clinical trial. The early-stage clinical trial will assess whether **SurVaxM** — a cancer vaccine developed at Roswell Park — is a safe and effective treatment option for patients with multiple myeloma, a rare type of blood cancer. The vaccine will be tested in combination with REVLIMID® (also known as lenalidomide) as maintenance therapy for adults with multiple myeloma. **Kelvin Lee, MD**, Jacobs Family Chair of Immunology, is leading the phase I clinical trial. Created by Roswell Park faculty members **Robert Fenstermaker, MD**, Chair of Neurosurgery, and **Michael Ciesielski, PhD**, Assistant Professor of Neurosurgery, the SurVaxM vaccine stimulates the immune system to target the survivin protein, which helps cancer cells survive under stressful conditions. SurVaxM was first tested in brain cancer patients, and it may prove effective against other types of cancer as well. A phase I study of SurVaxM in some brain cancers concluded last year, and a phase II study of the vaccine as part of combination

treatment for patients with newly diagnosed glioblastoma is ongoing at Roswell Park, the **Cleveland Clinic** and **Dana-Farber Cancer Institute**.

- While several clinical trials have demonstrated that maintenance therapy with lenalidomide reduces the risk of disease progression in patients with multiple myeloma, there have been no definitive results regarding overall survival. A new meta-analysis of three randomized controlled trials was conducted by the **Alliance for Clinical Trials in Oncology** (formerly Cancer and Leukemia Group B) (CALGB) with support from the NCI, **Intergroupe Francophone du Myélome** (IFM), and the **Gruppo Italiano Malattie Ematologiche dell'Adulto** (GIMEMA). It involved more than 1,200 participants. **Philip McCarthy, MD**, Director of Blood & Marrow Transplant at RPCI, presented the findings of the international team of researchers at the **American Society of Clinical Oncology (ASCO)** 52nd Annual Meeting. The study, "Lenalidomide (LEN) maintenance (MNTC) after high-dose melphalan and autologous stem cell transplant (ASCT) in multiple myeloma (MM): A meta-analysis (MA) of overall survival (OS)," found that Lenalidomide maintenance following autologous stem cell transplant can now be considered a standard of care for people with multiple myeloma. Dr. McCarthy is senior author on the meta-analysis and Principal Investigator of the U.S. study.

- Obesity has been identified as an adverse risk factor for survival in many adult and childhood cancers, but not in pediatric Hodgkin lymphoma, the most common cancer in adolescents. The results of a study led by researchers at RPCI and **Columbia University Medical Center** used advanced imaging methods to evaluate obesity and suggest a relationship between obesity and pediatric Hodgkin lymphoma disease relapse. The team's findings were presented at a poster session at **ASCO's 52nd Annual Meeting**. **Kara Kelly, MD**, Chair of the Department of Pediatric Oncology at Roswell Park, is senior author of the study. Dr. Kelly also spoke at an education session at the meeting.

- In a large randomized study, the immunotherapy drug nivolumab, a checkpoint inhibitor, was shown to be a safe and effective therapy for kidney cancer even in patients who continued treatment after their disease progressed. Results of the **phase III clinical study** conducted by physician-scientists at multiple centers, including RPCI was presented at **ASCO's 52nd Annual Meeting**. **Saby George, MD, FACP**, Associate Professor of Oncology in the Department of Medicine at Roswell Park is senior author of the study.

- The ability of tumor-infiltrating lymphocytes (TILs) such as T cells to produce multitudes of clones that overwhelm and effectively control cancer cells has been demonstrated, but the significance of the composition of T-cell repertories is unknown. RPCI researchers used deep T-cell receptor (TCR) sequencing to evaluate the clonal composition of TILs and identify novel prognostic biomarkers in ovarian cancer. The findings were presented at **ASCO's 52nd Annual Meeting**. While the presence of lymphocytes in tumors is often associated with better clinical outcomes, this research adds clarity on the diversity of T cells within the tumor environment and their influence on ovarian cancer outcomes, according to first author **Kunle Odunsi, MD, PhD, FRCOG, FACOG**, Deputy Director, M. Steven Piver Professor and Chair of Gynecologic Oncology, and Executive Director of the Center for Immunotherapy at Roswell Park. This study also

adds greater understanding of tumor-infiltrating lymphocytes and their influence on the causes and progression of ovarian cancer, according to **Richard Koya, MD, PhD**, Associate Director of the Roswell Park Center for Immunotherapy and Director of the Institute's Vector Development and Production Facility.

- Primary immunodeficiency disorders are a group of more than 300 single gene defects that affect the role of the immune system and prevent it from functioning properly. When RPCI researchers evaluated the overall and site-specific incidence of cancer among patients registered in the **United States Immune Deficiency Network (USIDNET)**, they found increase cancer incidence rates among patients with primary immunodeficiency diseases — and, in particular, a significant increase in lymphoma cases. The team's findings were presented at **ASCO's 52nd Annual Meeting**. This study found that patients with primary immunodeficiency disorders have a modest increase in overall cancer incidence. This increased incidence was driven by specific primary immunodeficiency disorders predisposing to specific cancers, particularly lymphoma. There was no observed increase risk in the most common cancers, cancers of the breast, lung, prostate and colon, according to senior author **Brahm Segal, MD**, Chief of Infectious Diseases at Roswell Park. This study adds to the discussion about the role of this immunosurveillance in the risk of developing the common cancers among those with compromised immune systems, according to first author **Paul Mayor, MD**, Fellow in the Department of Gynecologic Oncology at RPCI.

- Also at **ASCO's 52nd Annual Meeting**, **Marc Ernstoff, MD**, Chair of Medicine, led a discussion on Anti-PD1 therapy; **Jan Nowak, MD, PhD**, spoke at an education session on molecular oncology; **Steven Nurkin, MD**, spoke at an education session on metastatic colorectal cancer; and **Eunice Wang, MD**, led a poster discussion session on hematologic malignancies.

- At the **BIO International Convention**, RPCI announced the formation of **Global Biotechnology & Cancer Therapeutics (GBCT)**, a company that will guide and support biotech and life sciences startups. The partnership links Roswell Park's world-class cancer research capabilities with GBCT's expertise in assisting biotechnology and cancer therapeutics startup companies, including those arising from Roswell Park's own laboratories.

- Two recent studies led by RPCI have shown that years of physical inactivity prior to diagnosis was associated with increased risk of developing ovarian cancer and of dying from the disease. The research is based on two large pooled analyses of several studies from the **Ovarian Cancer Association Consortium**. **Kirsten Moysich, PhD, MS**, senior author of the studies and Distinguished Professor of Oncology in the Department of Cancer Prevention and Control at Roswell Park, says the findings suggest that any amount of regular, weekly recreational physical activity may reduce the risk for and improve survival from ovarian cancer, while a lack of regular exercise throughout adulthood is associated with an increased risk of developing and dying from ovarian cancer. These investigations were published online ahead of print in ***Cancer Epidemiology***, ***Biomarkers & Prevention*** (CEBP) and the ***British Journal of Cancer*** (BJC).

- A team of scientists, led by researchers at RPCI, have demonstrated that **photoacoustic imaging (PAI)** may be an effective tool for more accurately viewing and monitoring prostate cancer. Photoacoustic imaging is an emerging noninvasive imaging modality that has not yet been used in clinical settings. The researchers chose to study this technology's use in imaging prostate cancer because the prostate can be imaged in situ. Photoacoustic imaging of prostate cells, the researchers found, enabled good discrimination between cells with and without the prostate cancer marker, PSMA. The research was published in the ***Journal of Biomedical Optics***. **Kent Nastiuk, PhD**, Assistant Professor of Cancer Genetics and Genitourinary Cancers at Roswell Park, is senior author of the study. Dr. Nastiuk's co-authors include scientists from RPCI, the **University of Rochester** and the **Rochester Institute of Technology**.

- Research out of RPCI showed that expression of the vitamin D receptor protein may help protect against aggressive forms of breast cancer. The study offers new and valuable insights into the mechanisms of vitamin D and the influence this important micronutrient has on aggressive breast cancer subtypes, according to the study's senior author, **Song Yao, PhD**, Associate Professor of Oncology in the Department of Cancer Prevention and Control at Roswell Park. The study was published online ahead of print in ***Clinical Cancer Research***, a journal of the American Association for Cancer Research. In this study, a team that included **Jamila Al-Azhri, MD***, a surgical oncologist from **King Fahad Specialist Hospital**, Dammam, Saudi Arabia, who at the time was a visiting physician at Roswell Park, analyzed breast tumor tissues from 1,114 female patients. Study findings imply that vitamin D might have preventive benefits against triple-negative cancers, an aggressive breast cancer subtype. The research was supported by grants from **King Fahad Specialist Hospital** and the **National Cancer Institute (NCI)**.

- A study led by researchers at RPCI reports that nicotine exposure remains the same, while exposure to specific carcinogens and toxicants is reduced, among smokers who switch from tobacco cigarettes to electronic cigarettes. The new research was published online ahead of print in the journal ***Nicotine Tobacco Research***. According to lead author **Maciej Goniewicz, PhD, PharmD**, Assistant Professor of Oncology in the Department of Health Behavior, this is the first study with smokers to demonstrate that substituting tobacco cigarettes with electronic cigarettes may reduce exposure to numerous toxicants and carcinogens present in tobacco cigarettes. Neal Benowitz, MD, Professor of Medicine at the **University of California, San Francisco** is co-author of the study.

- A new large study concludes that African-American women who engaged in recent vigorous exercise had a 12% lower risk of being diagnosed with breast cancer. The research, led by **Zhihong Gong, PhD**, Assistant Professor of Oncology in the Department of Cancer Prevention and Control at RPCI, is in collaboration with colleagues at **Boston University** and the **University of North Carolina at Chapel Hill**. The study is significant because it's one of the first large studies on the relationship between physical activity and breast cancer risk in African-Americans, and because it highlights steps African-American women can take to reduce their risk for breast cancer. The new research is based on data from the African American Breast Cancer Epidemiology and Risk Consortium (AMBER). **Christine Ambrosone, PhD**, is a Principal Investigator of the

Amber Consortium and Senior Vice President of Population Sciences at Roswell Park, as well as a co-author of this study.

- A research team led by **Hannelore Heemers, PhD***, of **Cleveland Clinic's Lerner Research Institute Department of Cancer Biology** and **Song Liu, PhD**, Vice Chair of Bioinformatics at RPCI, has demonstrated that when genomic fingerprinting is performed on only a single tumor sample in prostate cancer patients, a smaller but more aggressive tumor could potentially be missed. Genomic fingerprinting has helped physicians predict the aggressiveness of prostate cancer based on the tumor's genetic makeup and tailor their treatment plans accordingly. However, in the majority of cases, while there are multiple prostate tumors present, typically only the largest tumor is fingerprinted. This study suggests that fingerprinting one tumor is not sufficient to guide treatment decisions. **James Mohler, MD**, Chair of the Department of Urology at Roswell Park was a co-author on the study and advises that clinicians need to be careful about using the information from genomic fingerprinting because the analysis may not have been performed on the most aggressive portion of a man's prostate cancer. This study was published in the journal ***European Urology***.

- RPCI scientists report that several flavorings added to electronic cigarettes impact the toxicity of the devices and that, among the tested flavors, strawberry was the most toxic. The researchers also confirmed an earlier finding that increasing the battery output voltage of these devices significantly increases toxicity. According to the study's senior author, **Maciej Goniewicz, PhD, PharmD**, Assistant Professor of Oncology in the Department of Health Behavior, this study suggests that various characteristics of e-cigarettes, including any flavorings, may induce inhalation toxicity and, therefore, caution should be used with these products until more comprehensive studies are performed. The study was published ahead of print in the journal ***Tobacco Control***.

- RPCI President and CEO **Candace S. Johnson, PhD**, completed her core leadership team with the appointment of **Shirley A. Johnson, MBA**, **MS, RN** as Senior Vice President of Nursing and Patient Care Services and Chief Nursing Officer. Ms. Johnson joined the Roswell Park staff on Oct. 31, 2016 with nearly 25 years of experience in oncology nursing and nursing administration, and with four decades of service as a registered nurse. A two-time past President of the Association of Cancer Executives, Ms. Johnson has been recognized with the American College of Surgeons Commission on Cancer Award for Distinguished Service, in 2006, and the California State Legislature 2013 Woman of the Year distinction. Ms. Johnson leads Ambulatory Patient Care Operations.

- **The Roswell Park Community Cancer Practice** network of outstanding oncology physicians has expanded with the appointments of **Frederick Hong, MD**, and **Michael Krabak, MD, PhD**, as staff physicians at **Soniwala Hematology Oncology Associates** at 199 Park Club Lane, Suite 200, Williamsville, NY. They join Roswell Park with nearly 60 years of combined experience as physicians and more than two decades each caring for patients with cancer. Both care for patients with various solid tumors and hematologic cancers.

- **Stereotactic body radiation therapy (SBRT)** is a specialized and highly targeted method of delivering radiotherapy, or radiation therapy, to treat cancer. This approach, used to treat many solid-tumor cancers, including lung, liver and kidney cancers, can mean greater convenience and quality of life for patients because it involves fewer individual treatments and can help to spare healthy tissue. In a study led by **Anurag Singh, MD**, of RPCI and presented at the **American Society for Radiation Oncology (ASTRO) 2016 Annual Meeting** suggests that a single high-intensity SBRT dose can be as effective as three slightly lower doses of radiation. Working with colleagues from Roswell Park as well as collaborators from the **Cleveland Clinic** and **Upstate New York Medical University**, Dr. Singh undertook a phase II clinical study involving nearly 100 patients treated for early-stage non-small-cell lung cancer between 2008 and 2015.

- Looking for a better way to measure quality of care and share best practices in surgical oncology, a team from RPCI developed a quality assessment tool, called the **Quality Cystectomy Score (QCS)**, and validated it in a study based on 10 years of prospectively collected data on robot-assisted cystectomies. The researchers reported that centers that carefully track various aspects of care can better predict patient outcomes and improve patient care. For the new study, a team led by **Khurshid Guru, MD**, Director of Robotic Surgery and Vice Chair of Urology, set out to identify those elements of care that can be controlled and might therefore represent opportunities for improving care. Surgical performance is often evaluated using survival as a measure. However, survival alone may not reliably define surgical performance, advises the study's first author, **Ahmed Aly Hussein, MD**, a Clinical Fellow in the Department of Urology at Roswell Park. The researchers shared their findings in the journal ***Urology***.

- African-American and Hispanic men in the United States are less likely to receive therapy for prostate cancer compared to Caucasian men—even when they have more aggressive disease, according to new research from RPCI and **Vanderbilt University Medical Center**. The study, senior authored by **Willie Underwood, III, MD, MPH, MSci,** of Roswell Park, was published online ahead of print in the journal ***Urology***. The study was based on data for 327,641 men diagnosed with localized prostate cancer between 2004 and 2011, as reported to the national Surveillance, Epidemiology and End Results (SEER) Program. The researchers evaluated factors including race, age, treatment, Gleason score, marital status, year of diagnosis, D'Amico risk classification and whether or not the men received definitive treatment. In what is also believed to be the largest analysis of prostate cancer treatment patterns among Asian-American men, the researchers report that men of Asian descent were older and had more advanced disease at the time of diagnosis, and that Asian-American men were as likely to receive treatment as Caucasian men.

- The first comprehensive study analyzing follow-up care among childhood cancer survivors concludes that fewer than half of the adult survivors of childhood cancers — who remain at greater risk for chronic illnesses — receive adequate long-term follow-up care. The findings of this **National Cancer Institute-supported** research have been reported by scientists from RPCI in the ***Journal of Adolescent and Young Adult Oncology***. According to **Denise Rokitka, MD, MPH**, Assistant Professor in the Department of Pediatric Oncology at Roswell Park, surveillance for long-term

complications allows us to better diagnose and manage chronic health conditions in childhood cancer survivors, and may improve their quality of life. The study examined follow-up records from 370 adults who are childhood cancer survivors. Senior author on the study, **Martin Mahoney, MD, PhD**, says that interventions focused on educating both patients and their primary care physicians may help to increase long-term follow-up care for this at-risk population. This research was supported, in part, by a grant from the **Roswell Park Alliance Foundation**.

- How to harness the immune system to improve the outcome of ovarian cancer patients was the focus of a presentation by **Kunle Odunsi, MD, PhD**, Deputy Director of RPCI, at the **16th Biennial Meeting of the International Gynecologic Cancer Society** in Lisbon, Portugal. Dr. Odunsi highlighted some of the latest advances in immunotherapy research during the prestigious gathering of clinicians, scientists and patient advocates. Dr. Odunsi is Chair of Gynecologic Oncology and Executive Director of the Center for Immunotherapy. The **Center for Immunotherapy at Roswell Park** is conducting clinical trials focused on increasing the number of immune cells that have the capacity to destroy ovarian cancer, either by vaccination or by adoptive T cell therapy. In addition, CFI investigators are investigating novel strategies for modulating the tumor microenvironment in order to prevent ovarian cancer cells from evading immune attack.

- Immunotherapy, which uses the body's own immune system to fight disease, is transforming the treatment of several types of cancers. Severe adverse effects can result from these groundbreaking cancer treatments, however, and when they do, it's important to recognize and quickly address them, researchers write in the ***New England Journal of Medicine***. **Igor Puzanov, MD, MSCI, FACP**, Professor of Oncology, Director of the Early Phase Clinical Trials Program and Section Chief of Melanoma at RPCI, is a co-author on the case study, a review of two instances in which rare but life-threatening adverse events occurred as a result of combination immunotherapy. The analysis was led by researchers at **Vanderbilt University Medical Center** and **Johns Hopkins University**. Two melanoma patients developed myocarditis, or inflammation of the heart muscle, following treatment with ipilimumab and nivolumab, which belong to the class of immunotherapy drugs known as immune checkpoint inhibitors. While immunotherapy-related myocarditis is extremely rare, the authors conclude that it occurs with greater frequency and severity when the drugs are given in combination and that early recognition is critical. Dr. Puzanov shared that currently, we don't have biomarkers to predict this toxicity and no consensus on how to screen for or measure it. Roswell Park oncologist researchers are part of an effort among premier institutions in cancer immunotherapy to capture information about these cases and study them in-depth, working prospectively to understand who may be prone to cardiac side effects, how often to monitor and how to treat them.

- Currently, human papillomavirus (HPV) vaccination rates remain low across the U.S., with fewer than 40% of girls and just over 21% of boys receiving the recommended vaccine series. Research from RPCI has identified barriers that need to be overcome to improve vaccination rates, as well as possible strategies for doing so. According to senior author **Martin Mahoney, MD, PhD**, Professor of Oncology in the Department of Medicine at RPCI, this research offers practical strategies to help parents and clinicians to overcome barriers in order to increase HPV vaccination rates, which is a real

opportunity to prevent thousands of cases of cancer. According to the study's first author, **Christy Widman**, Community Outreach Manager in the Department of Cancer Prevention and Control, this research is novel in that it assesses the views of both parents and clinicians in the same community at the same time. What the research team found most striking was the need for education about the HPV vaccine among both parents and clinicians. School-based programming and general media campaigns also emerged as promising avenues for future educational efforts. This study was published online ahead of print in the ***Journal of Cancer Education***.

- A new study adds to the evidence that vitamin D can help fight some forms of cancer. The study, which was led by researchers at RPCI and **Kaiser Permanente**, shows that women with higher levels of vitamin D when diagnosed with breast cancer experienced longer cancer-free survival and were about 30% less likely to die from the disease. The first author of the study, **Song Yao, PhD**, Associate Professor of Oncology in the Department of Cancer Prevention and Control at Roswell Park, says that the reduced risk was more pronounced in younger women, specifically those diagnosed with breast cancer before menopause, and that study suggests that vitamin D may extend survival in women diagnosed with breast cancer overall. Th study was published online ahead of print by the journal ***JAMA Oncology***.

- Preclinical research at RPCI demonstrates that the new anticancer drug CBL0137 is more effective than standard chemotherapy at killing melanoma tumor cells and was well tolerated in laboratory models. CBL0137, the lead compound in a class of small-molecule anticancer agents known as curaxins, modulates several important signaling pathways involved in the development of cancer. RPCI scientists **Katerina Gurova, MD, PhD**, Associate Professor in the Department of Cell Stress Biology, and **Andrei Gudkov, PhD, DSci**, Senior Vice President of Basic Science and Chair of that department, co-inventors of curaxins, have demonstrated CBL0137's efficacy in numerous preclinical models of cancer and outlined its unique mechanism of action in previous publications. The new study describes the results of a series of preclinical studies led by Roswell Park surgical oncologist, **Joseph Skitzki, MD, FACS**. The study's first author is **Minhyung Kim, MD**, an Affiliate Member in the Department of Surgical Oncology at Roswell Park. Published online ahead of print in ***Cancer Research***, a journal of the American Association for Cancer Research, this study demonstrated that CBL0137 had several distinct advantages over other therapies, including its rapid accumulation in cancer tissues, simultaneous targeting of multiple cellular pathways critical for tumor cell survival and growth, and less toxicity toward normal cells. Roswell Park scientists are actively investigating CBL0137 to assess its effectiveness in cancers of the liver, kidney, brain and sarcoma, in both preclinical and clinical studies. Curaxin CBL0137 is one of a series of novel prospective anticancer agents that are being developed with close participation among **Cleveland Biolabs Inc.**, **Incuron LLC** and Roswell Park.

- Predicting when prostate cancer is aggressive enough to warrant immediate treatment can be a challenge. Researchers at RPCI have found that a particular prostate cancer nomogram accurately predicts the outcomes of prostate cancer patients and is a useful tool for informing treatment decisions. The findings were published online ahead of print in the ***Journal of the National Comprehensive Cancer Network***. This research

offered a new assessment of the **Kattan post-operative radical prostatectomy nomogram** using modern, standardized clinical and pathologic definitions to compare actual outcomes with those predicted by the nomogram. This study showed that the Kattan nomogram is a robust predictor of the likelihood of biochemical failure and treatment failure. **James Mohler, MD**, Associate Director for Translational Research and Chair of the Department of Urology at Roswell Park, is the senior author of the study. The study's first author is **Rochelle Payne Ondracek, PhD**, Research Associate in the Department of Cancer Prevention and Population Sciences at Roswell Park.

- A new clinical study underway at RPCI is the first to test the combination of the immunotherapy pembrolizumab with two other drugs as treatment for recurrent epithelial ovarian cancer, and is also the first ovarian cancer clinical trial to incorporate analysis of patients' microbiomes — the bacteria present in the human gut and other organs. This new study, led by Principal Investigator **Emese Zsiros, MD, PhD, FACOG**, Assistant Professor of Oncology in Roswell Park's Department of Gynecologic Oncology and Center for Immunotherapy, is a phase II clinical trial that will enroll approximately 40 patients with recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer.

- RPCI physicians and researchers were among the scientific leaders offering new insights into the causes and treatment of blood disorders during the **58th annual meeting of the American Society of Hematology (ASH)** December 3-6 in San Diego, California. Highlights of the RPCI-led research selected for oral presentations during this prestigious meeting include identification of new targeted therapies and promising treatment combinations for acute myeloid leukemia (AML).

    - Several Roswell Park faculty members offered their expertise through participation in educational, training and scientific programs during the meeting. **Eunice Wang, MD**, and **Kara Kelly, MD**, served as moderators during two separate scientific oral programs. **Scott Abrams, PhD**, and **Kelvin Lee, MD**, from the Department of Immunology and **Theresa Hahn, PhD**, from the Department of Medicine, led training workshops to encourage and support students as they pursue academic careers in basic, translational and clinical research. And **Philip McCarthy, MD**, Director of the Blood and Marrow Transplant Center, led an education discussion about transplant maintenance.

    - **Theresa Hahn, PhD**, Professor of Oncology in the Department of Medicine at Roswell Park, is co-senior author with **Lara Sucheston-Campbell, PhD***, of The Ohio State University colleges of Pharmacy and Veterinary Medicine on a study that examined the association of previously reported genetic markers, single-nucleotide polymorphisms (SNPs) and their relationship to survival outcomes after blood and marrow transplant using data from the DISCOVeRY-BMT study. Their analysis incorporated data from the Center for International Blood and Marrow Transplant Research (CIBMTR) on more than 3,500 patients transplanted between 2000 and 2011 and their matched unrelated donors. While the team used the DISCOVeRY-BMT study to see if they could replicate results from previously published smaller studies of individual SNPs, none of the

previously reported SNPs could be replicated in the much larger DISCOVeRY-BMT study population, possibly due to differences in the patient populations and types of BMT donors.

- **Kelvin Lee, MD**, Chair of the Department of Immunology at Roswell Park, is the senior author of a study on CD28, a key molecule known to regulate the metabolism of T cells and the survival of long-lived plasma cells. In this study, scientists report that this influential molecule regulates the nutrients available to plasma cells, as well as their metabolic fitness. They expect that this understanding will inform more effective design of cancer vaccines and may also offer the opportunity for novel targeted approaches to fight autoimmune responses often exhibited in cancer.

- **Qianqian Zhu, PhD**, Assistant Professor and **Li Yan, PhD**, Assistant Professor, both in the Department of Biostatistics and Bioinformatics at Roswell Park, are co-first authors, with **Theresa Hahn, PhD**, Professor of Oncology in the Department of Medicine at Roswell Park, serving as co-senior author with **Lara Sucheston-Campbell, PhD***, of The Ohio State University colleges of Pharmacy and Veterinary Medicine, on a large national study that analyzed the relationship of genetic markers, single-nucleotide polymorphisms (SNPs), to survival outcomes following blood and marrow transplant (BMT), and is based on data from the DISCOVeRY-BMT study. The team's analysis incorporated data from the Center for International Blood and Marrow Transplant Research (CIBMTR) on more than 3,500 patients transplanted between 2000 and 2011 and their matched unrelated donors. The researchers studied rare, uncommon SNPs in the DISCOVeRY-BMT study population and found 6 rare variants in the gene OR51D1 were associated with overall survival as well as transplant-related mortality. OR51D1 is an olfactory receptor involved in the sense of smell. However, it has recently been reported that proteins made by this gene are found on some white blood cells involved in the immune response.

- **Eunice S. Wang, MD**, Chief of the Leukemia Service at Roswell Park, is lead author and Robert Collins, MD, of the University of Texas Southwestern Medical Center is the senior author, on a study in which 26 patients received crenolanib, a potent and specific FLT3 inhibitor, along with standard chemotherapy. The research team reports that the combination was well tolerated and 88% of the patients achieved a complete remission following one cycle of treatment. The overall response rate was 96%. After six months of follow-up, only three patients have relapsed. These data, although preliminary, are important in that they demonstrate that this novel combination therapy can be safely administered for the treatment of this type of AML. Of note, Roswell Park has accrued the most patients in the nation to this important clinical trial, reflecting the Institute's dedication to providing the most cutting-edge therapeutic treatments for leukemia patients.

- **Bora Baysal, MD, PhD**, Associate Professor of Oncology in the Department of Pathology and Laboratory Medicine at Roswell Park, is the lead author and **Shraddha Sharma, PhD**, Research Associate in the Department of Pathology at

Roswell Park, is the last author of a study on whether human immunodeficiency virus-1 (HIV-1) infection increases the risk of certain malignant tumors such as cervical cancer and lymphomas. Findings suggest a previously unrecognized mechanism by which HIV-1 infection might be inhibited. This has the potential to further define specific gene targets, opens new avenues of inquiry on gene functions and offers potential opportunities for therapeutic targets against HIV-1 infection.

- A study led by RPCI scientists says label information on many hookah tobacco products is misleading and may be misinterpreted by consumers, according to new research on nicotine and pH levels in hookah tobacco. The study was published online ahead of print in the journal ***Tobacco Regulatory Science***. **Mark Travers, PhD**, is senior author of the study and a Research Scientist in the Department of Health Behavior at Roswell Park. Misleading packaging and labeling provides hookah users with erroneous information and perpetuates a false impression of safety. This research supports the U.S. Food and Drug Administration's efforts to regulate hookah labeling.

- One of the main reasons cancer remains difficult to treat is that cancer cells have developed a multitude of mechanisms that allow them to evade destruction by the immune system. One of these escape mechanisms involves a type of immune cell called myeloid-derived suppressor cells (MDSCs). A recent study led by **Sharon Evans, PhD**, Professor of Oncology and Immunology at RPCI, provides new insight into how MDSCs enable tumor cells to circumvent immune attack and offer the potential for improving cancer immunotherapy. The research was published in the journal ***eLife***. This investigation could lead to the identification of novel therapeutic targets that bolster the body's protective mechanisms against the development of metastatic disease. These new insights may allow physicians to address a pressing challenge: how to determine which cancer patients are most likely to benefit from T lymphocyte-based immune therapeutics. The study's first author, **Amy Ku**, an MD/PhD student in the Department of Immunology at Roswell Park noted that this research reinforces the important message that routine profiling of the cellular constituents within tissues does not always provide the whole picture in cancer.

- In new research published in the journal ***Science,*** RPCI scientists have identified two gatekeeper genes that allow prostate cancer to progress and resist treatment. Their work illuminates the mechanisms behind lineage plasticity, the ability of prostate cancer to adapt to therapy, and highlights opportunities to disrupt and even reverse this deadly process. According to co-senior author **David Goodrich, PhD**, Professor of Oncology in the Department of Pharmacology and Therapeutics, the team has discovered a mechanism that causes progression to this aggressive form of prostate cancer, providing a new opportunity to prevent or treat lethal forms of prostate cancer.

- Predisposition to cancer and cancer progression can result from gene mutations that cause elevated rates of genetic damage. Similarly, carcinogens, including some that are used in chemotherapy during cancer treatment, act by damaging the DNA. A new study from RPCI offers insights into the mechanisms that can lead to genetic mutations and proposes opportunities for developing prognostic tests for specific blood disorders and

blood cancers based on these striking findings. For this study, **Steven Pruitt, PhD**, Professor of Oncology in the Department of Molecular and Cellular Biology, led a team of scientists that studies suggest that Mic-Seq, next-generation sequencing of red blood cell micronuclei to define the locations of chromosome breaks genome-wide, can provide an effective means for identifying and predicting locations that are susceptible to genetic damage in a variety of circumstances. The study was published online ahead of print in the journal ***PLOS Genetics***.

- A team of scientists led by **Irwin Gelman, PhD**, Professor of Oncology in the Department of Cancer Genetics at RPCI, has identified an 11-gene signature unique to advanced recurrent prostate cancer that they believe will help to identify these aggressive and potentially fatal prostate cancers sooner. Standard therapy for prostate cancer, the third-leading cause of cancer-related deaths in American men, is based on blocking androgens, the male sex hormones. However, for some men, prostate cancer recurs despite androgen-deprivation therapy. Findings of this study were published online ahead of print in the journal ***Oncotarget***. This study adds to the understanding of why some men experience metastatic progressive disease after androgen-deprivation therapy. Data collected in the study strengthens the idea that combining therapies that inhibit the oncogene Src with those that constrain the androgen receptor may help prevent recurrence of aggressive, lethal prostate cancer.

- RPCI faculty members are among the leaders who helped plan the **2017 Gastrointestinal Cancer Symposium**, a three-day specialized oncology meeting that was held in San Francisco, CA. **Steven Hochwald, MD, FACS**, Chief of Gastrointestinal Surgery at Roswell Park, has taken a national leadership role in the annual meeting for the past six years, currently serving as a member of the Symposium program committee. During the 2017 meeting, he also chaired a panel discussion on clinical trials for pancreatic, small-bowel and liver cancers.

    - In addition, several other Roswell Park clinicians presented new research findings at the meeting:

        - **Renuka Iyer, MD**, Co-Director of the Liver and Pancreas Tumor Center at Roswell Park, is the lead author of consensus treatment guidelines for cholangiocarcinoma or bile-duct cancer, a rare and often fatal disease, and summarized these new recommendations in two presentations at the meeting.

        - **Patrick Boland, MD**, Assistant Professor of Oncology in the Department of Medicine presented two posters. The first reported the findings of a study evaluating the effectiveness of two chemotherapy drugs for patients diagnosed with advanced metastatic colon cancer. The authors found that combination treatment with nintedanib and capecitabine was well tolerated in the phase I study; a phase II clinical trial is underway. For the second presentation, Dr. Boland and colleagues at Roswell Park evaluated a national database (NCDB) that collects data on approximately 70% of rectal cancer cases in the U.S. They examined more than 2,900 patients whose rectal cancer completely responded to

chemoradiation. The team compared patients who received chemotherapy after adjuvant surgery with those who did not, and determined that patients treated with this approach have excellent prognoses.

- **Lindy Davis, MD***, a Fellow in the Department of Surgical Oncology at Roswell Park, is the first author on a study examining a prognostic marker in colorectal cancer. The research team defined expression patterns of the target protein focal adhesion kinase (FAK) in colorectal cancer and correlated those patterns with patient outcomes. They examined tumor samples from 298 patients using tissue microarrays, and found that normal and early-stage colorectal cancer had lower FAK expression when compared to more advanced stages — suggesting possible strategies for treating many solid-tumor cancers.

- Metastasis, or spread of a tumor from the site of origin to additional organs, causes >90% of cancer-related deaths, but our understanding of the molecular mechanisms behind metastasis remains limited. A research team led by **Dean Tang, PhD**, Chair of the Department of Pharmacology and Therapeutics at RPCI, examined the multistep process that leads to metastasis and their work, which illuminates the role of prostate cancer stem cells that promote tumor growth and metastasis. This research was published online ahead of print in the journal ***Nature Communications***. This study represents the most comprehensive investigation to date of the role of the **miR-141** molecule in regulating prostate cancer stem cells and their role in metastasis. These preliminary findings suggest that miR-141 may suppress the metastatic cascade at an early stage and that the overexpression of miR-141 in prostate cancer cells results in less metastasis. The research team's observations provide a rationale for developing these targeted miRNA molecules into novel antitumor and antimetastasis replacement therapies.

- More than 1 in 4 adults and nearly 1 in 10 youth use tobacco, according to findings from the **Population Assessment of Tobacco and Health (PATH) Study**. The PATH Study, established in 2011 through collaboration between the **National Institute of Health's National Institute on Drug Abuse** and the **U.S. Food and Drug Administration's Center for Tobacco Products**, is a uniquely large, nationally representative longitudinal study designed to examine tobacco use behaviors and health among the U.S. population over multiple years of follow-up data collection. The PATH Study is being conducted by Westat of Rockville, MD with RPCI as the scientific lead. **Andrew Hyland, PhD**, Chair of the Department of Health Behavior at Roswell Park is the principal investigator of the PATH Study. Lead author on the study, **Karin Kasza, MA**, Senior Research Specialist in the Department of Health Behavior at Roswell Park noted that the findings of this study will serve as the baseline for comparison to future waves of PATH Study data in the effort to understand changes in use of tobacco products over time, including switching among types of products, quitting tobacco, and trajectories of use of multiple products.

- **Tactiva Therapeutics LLC**, a new biotech company spun off from RPCI, will create jobs as it develops some of the most promising concepts in the burgeoning field of cancer immunotherapy and accelerates the timeline for getting beneficial therapies to patients.

Founded by a trio of Buffalo entrepreneurs, Tactiva will pursue and expand concepts originating from **RPCI's Center for Immunotherapy**. At the announcement celebrating the spinoff, **New York State Lieutenant Governor Kathy Hochul** noted that this, "…new biotech company spun off from Roswell Park Cancer Institute showcases the potential for New York innovation to impact lives around the world." **Dr. Kunle Odunsi**, Tactiva Co-Founder and Chief Medical Officer, and also Roswell Park's Deputy Director, Chair of Gynecologic Oncology and Center for Immunotherapy Executive Director at Roswell Park, noted that with Tactiva, researchers are making the two main types of immune cells work together in a way that has never been tried before. Tactiva plans to initiate a clinical trial within the next year that will make this novel platform available to patients for the first time. Preclinical studies suggest that the Tactiva platform may be an effective approach for treating several different solid and liquid tumors, including some ovarian, pancreatic, prostate, lung, esophageal, melanoma and sarcoma cancers, as well as some forms of multiple myeloma. **Richard Koya, MD, PhD**, Co-Founder and Chief Scientific Officer for Tactiva as well as Associate Director of the Roswell Park Center for Immunotherapy noted that researchers will take a patient's own stem cells, hematopoietic stem cells that are the progenitors of all other blood cells, and engineer them to express specialized T-cell receptors that recognize and target cancer cells without damaging healthy cells. The self-perpetuating nature of the stem cells gives them the ability to provide lifelong protection against cancer, standing on guard like a sentry. While much will depend on early clinical trials, the researchers believe this may be a highly effective way to deliver a lethal and enduring hit to the tumor cells.

- Researchers at RPCI are exploring a new mechanism for the amino acid tryptophan, which supports the immune system's efforts to fight cancer. **Kunle Odunsi, MD, PhD, FRCOG, FACOG**, Deputy Director and M. Steven Piver Professor and Chair of the Department of Gynecologic Oncology and Executive Director of the Center for Immunotherapy at RPCI, will present results from novel research on the role of tryptophan in tumor development at the **Frontiers in Cancer Immunotherapy** symposium, hosted by the New York Academy of Sciences. Immune cells are highly dependent on tryptophan. Cancer cells use this weakness to their advantage by turning on an enzyme called indoleamine 2, 3-dioxygenase — IDO1 for short — that starves the immune cells of tryptophan, allowing cancer cells to escape from immune attack, reproduce and spread. Early-stage clinical trials at Roswell Park are offering new insights on how the **IDO1 pathway** is an attractive target for immunotherapy in ovarian cancer. The first study is testing the impact of IDO1 inhibition in newly diagnosed ovarian cancer patients. A second study is examining whether inhibition of IDO1 would enhance the efficacy of NY-ESO-1 vaccination and lead to durable remission. The vaccine by itself has shown promise in the treatment of advanced ovarian cancer.

- Researchers at RPCI report that while high overall consumption of dairy products, and in particular of yogurt, is linked to a lower risk for breast cancer, high intake of American, cheddar and cream cheeses was associated with a slightly increased risk for breast cancer. According to the lead author of the study, **Susan McCann, PhD, RD**, Professor of Oncology in the Department of Cancer Prevention and Control at RPCI, dairy foods are complex mixtures of nutrients and non-nutrient substances that could be negatively as well as positively associated with breast cancer risk and future studies are needed to confirm the protective potential of yogurt in this type of cancer. The study was

published online ahead of print in the journal ***Current Developments in Nutrition***. **Christine Ambrosone, PhD**, Senior Vice President for Population Sciences and Chair of the Department of Cancer Prevention and Control noted that while diet is thought to be responsible for 30% of all cancers, further research may help us more fully understand which food products are most valuable in terms of reducing risk for this disease.

- Cancer of the esophagus is more often diagnosed in men than in women and is usually treated surgically. RPCI researchers have created a novel calculator that more readily identifies patients who may benefit from therapy that reduces the extent of the disease prior to surgery. Lead author of the study, **Emmanuel Gabriel, MD, PhD**, of the Department of Surgical Oncology at RPCI, says use of calculators to estimate outcomes is becoming increasingly common, and is being used to aid in treatment decision-making and in individualizing therapy for each patient. The study was published online ahead of print by the ***Journal of the American College of Surgeons***. Senior author of the study, **Moshim Kukar, MD**, Assistant Professor of Surgery in the Department of Surgical Oncology at Roswell Park noted that this effort is a good example of how you can use large national databases to create calculators to guide and improve preoperative decision-making. However, Dr. Kukar noted that the calculator should be validated prospectively before firm conclusions can be drawn about its value in treatment selection.

- New research led by a radiation oncologist at RPCI indicates that less may be more when it comes to some forms of radiation therapy for cancer. In a presentation highlighted in a plenary session at the **Multidisciplinary Thoracic Cancers Symposium**, **Anurag Singh, MD**, shared updated evidence that patients receiving stereotactic body radiation therapy (SBRT) as treatment for non-small cell lung cancer (NSCLC) benefit as much from a single fraction, or dose, of radiation as they would from the standard three-dose treatment schedule—and with significant advantages in terms of convenience for patients and caregivers. Dr. Singh is first author on the presentation of updated results from a randomized phase II clinical study conducted in collaboration with researchers from the **Cleveland Clinic** and **SUNY Upstate Medical University**. The study involved 98 patients treated for locally controlled peripheral NSCLC, or tumors located along the outside edges of the lung, between 2008 and 2015. While findings from this work were first presented at the American Society for Radiation Oncology 2016 Annual Meeting in September, this latest analysis reports data based on a longer follow-up interval (two years). Dr. Singh noted that this study is the first to show that one fraction of SBRT, a 'one and done' treatment approach, is as good as three fractions for early-stage lung cancer in terms of survival and toxicity.

- More than 10 teams from RPCI were invited to present their research at the **70th Society of Surgical Oncology (SSO) Annual Cancer Symposium**, with two teams sharing their findings in oral abstract discussions. This prestigious national meeting is an opportunity for RPCI to highlight its novel advances in clinical cancer care and basic science research, according to **John M. Kane III, MD, FACS**, Chair of Surgical Oncology at RPCI.

    - **Eriko Katsuta, MD, PhD**, Research Fellow at Roswell Park, and **Kazuaki Takabe, MD, PhD, FACS**, Clinical Chief of Breast Surgery, Alfiero Foundation Endowed

Chair in Breast Oncology and Professor of Oncology at Roswell Park, investigated the effectiveness of the orally active immunomodulatory drug FTY720 in combination with doxorubicin, one of the most commonly used anti-cancer drugs for breast cancer. They found that the combination suppressed obesity-mediated inflammation in laboratory models and represents a potential novel approach to treat obesity-associated breast cancer.

- **Lindy Davis, MD**, Clinical Fellow at Roswell Park, is first author on a study reporting results from analysis of the FAK protein in samples from 642 patients diagnosed with colorectal, breast or gastric cancers along with primary or metastatic melanoma. The researchers report that the FAK protein is found at different levels across cancer types; that FAK expression is associated with an aggressive type of colorectal cancer; and that melanoma had the highest overall FAK expression, suggesting that it may be a potential therapeutic target in melanoma.

- Two Roswell Park faculty members, **Steven Hochwald, MD, FACS**, and **Steven Nurkin, MD, MS**, contributed to panel discussions during the meeting. Dr. Hochwald, Chief of Gastrointestinal Surgery, led the discussion "Your Patient is Leaking (Esophageal Leaks): What Next?" Dr. Nurkin, Assistant Professor of Oncology, presented the talk, "Evidence-Based Approach to the Management of Locally Advanced Rectal Cancer."

- And two Roswell Park team members highlighted new surgical approaches in video presentations:

    - **Rupen Shah, MD**, Clinical Fellow at Roswell Park, showed a video of a minimally invasive esophagectomy. His presentation is titled "Minimally Invasive Ivor Lewis Esophagogastrectomy with Side-to-Side Anastomosis."

    - **Emmanuel Gabriel, MD, PhD**, Clinical Fellow at Roswell Park, presented a video demonstrating a laparoscopic approach to gastrectomy, titled "Laparoscopic Proximal Gastrectomy for Gastric Adenocarcinoma."

- Additionally, Roswell Park teams shared research findings in poster presentations at the meeting:

    - **Tsutomu Kawaguchi, MD, PhD**, Clinical Fellow at Roswell Park, and **Dr. Takabe** presented "Novel Prognostic Biomarker Using MicroRNA Signature of Breast Cancer." The pair also offered "Prognostic Relevance of Tumor Suppressive MicroRNA for Breast Cancer."

    - **Sumana Narayanan, MD**, Clinical Fellow at Roswell Park, and **Dr. Nurkin** presented "The Influence of Clinicopathologic and Molecular Markers on Stage Specific Survival of Right Versus Left Colon Cancer."

- **Eriko Katsuta, MD, PhD**, Clinical Fellow at Roswell Park, and **Dr. Takabe** presented "CD73 as a Novel Prognostic Marker of Pancreatic Adenocarcinoma," and "Pancreatic Adenocarcinoma with High Expression of CD31 Have Better Prognosis."

- **Keli Turner, MD**, Clinical Fellow at Roswell Park, and **Moshim Kukar, MD**, Assistant Professor in the Department of Surgical Oncology, presented "Neoadjuvant FOLFIRINOX and/or Gemcitabine/Abraxane for Advanced Pancreatic Adenocarcinoma."

- **Emmanuel Gabriel, MD, PhD**, Clinical Fellow at Roswell Park, gave three poster presentations:
  - "Adjuvant Chemotherapy Following Neoadjuvant Chemoradiation and Surgery for Esophageal Cancer: Does it Improve Outcome?"
  - "Association of Racial and Socioeconomic Disparities with Hospital Case Volume Among Patients Undergoing Esophagectomy"
  - "The Immediate Post-Esophagectomy Chest X-ray Predicts Respiratory Failure and the Need for Tracheostomy"

Community Support & Advocacy

- RPCI acquired the Southtowns hematology/oncology practice of **Isosceles Garbes, MD**, increasing convenience and access to advanced oncology services for patients. **Roswell Park Hematology Oncology Southtowns** is the new name of the practice, which operates out of 3612 Seneca St. in West Seneca, N.Y., as a Roswell Park community cancer practice. Dr. Garbes and his team provide compassionate care, specializing in the diagnosis and treatment of cancer and blood disorders. Affiliation with Roswell Park gives the practice and its patients access to a comprehensive slate of cancer diagnostic and treatment services, the ability to participate in multidisciplinary case review, and the opportunity for patients to access treatments not available at other community practices through participation in clinical trials. The agreement also provides opportunities for practice staff to receive training in oncology care.

- RPCI's Super Bowl commercial earned top honors with a **Hermes Creative Platinum** award. The Hermes Creative Awards, presented by the **Association of Marketing and Communications Professionals**, recognizes outstanding work in the industry while promoting the philanthropic nature of marketing and communications professionals. Winners were selected from more than 6,000 entries, grouped in 195 categories. RPCI's light-hearted commercial, Team Roswell, is the creation of the RPCI Marketing Department and its Creative Services team under the direction of **Laurel DiBrog**, Chief Marketing and Communications Officer, and produced internally by the staff under the direction of **Ben Richey**, Director of Creative Services. The commercial features NFL analyst for CBS Sports **Steve Tasker**; RPCI President/CEO **Candace S. Johnson, PhD**; RPCI Deputy Director **Kunle Odunsi, MD, PhD**; Facility Director of Therapeutic Cell Production **Chris Choi, PhD**; Radiation Oncologist, Director of Breast and Soft

Tissue/Melanoma Radiation Medicine **Kilian Salerno, MD**; and Department of Head and Neck Surgery physician **Vishal Gupta, MD**. These faculty members and supporters took a playful approach to the more serious topic of cancer. The message behind the commercial supports RPCI's current message that it takes a team to fight cancer and that cancer patients at RPCI do not fight this disease alone. All of this was set among fog machines, confetti and streamers and a group of RPCI employees cheering on their favorite team and filmed in slow motion to emphasize the suspense leading up to a great finish. Roswell Park's 2017 Super Bowl commercial inspired viewers with a **"Victory Bell"** theme.

- RPCI named its new Clinical Sciences Center in recognition of a historic gift made by Scott Bieler to the **Roswell Park Alliance Foundation**. The **Scott Bieler Clinical Sciences Center** houses a number of clinics, services and resources for the nearly 32,000 patients treated at RPCI every year. The Scott Bieler Clinical Sciences Center is RPCI's first clinical expansion since 1998 and includes an expanded chemo infusion center; new centers dedicated to cancer survivorship and supportive/palliative care; and the Women's Health Center, which incorporates services related to breast cancer, gynecologic cancers and breast imaging.

- RPCI invited cancer survivors to share their stories and listen as others told theirs during a special event held in June at Roswell Park. The event, **"A Hero's Journey,"** explored the power of storytelling in the healing process. The program was led by **Lani Peterson, PsyD**, a psychologist and award-winning storyteller who helps people connect with each other through their personal stories, and **Fran Yardley**, a retreat director, storyteller, writer and workshop leader who focuses on healing through storytelling. Survivors had the opportunity to connect with themselves and others through story-sharing activities while building community with those who have been on similar paths. They also received a customized journal to continue their life's journey after the event.

- RPCI invited cancer patients, advocates, researchers, community leaders and health care professionals to come together for a local session of then U.S. Vice President Joe Biden's **Cancer Moonshot Summit**. During the national event, community members could watch the local event live at Facebook.com/RoswellPark. On campus, employees and guests enjoyed a panel discussion, the live stream of the Vice President's remarks and a continental breakfast that followed, which allowed for further idea sharing.

- **The Ride For Roswell**, the single largest fundraising event in Western New York and North America's largest single-day cycling fundraiser, concluded its 21st year by raising a total of **$4.5 million** for cancer research and patient-care programs at RPCI. Ride Weekend involved more than 10,000 riders, volunteers and countless other supporters. In 1996, the first Ride For Roswell had 1,000 riders who raised just over $100,000. Over the past 21 years, The Ride has raised $38 million for RPCI, and more than 100,000 riders and volunteers have participated in the event. Presenting Sponsor of the event is West Herr Automotive Group.

- In a new and historic collaboration, the **Indian Health Service of the U.S. Department of Health and Human Services** and RPCI partnered to reduce cancer's impact on American

Indian and Alaska Native communities around the country. The agreement focuses on health care and cancer prevention as well as facilitation of research and expansion of career and educational opportunities for Native American populations. The agreement will strengthen Roswell Park's relationships with Native American communities and help ensure that culturally appropriate cancer education, research and services are accessible to everyone, according to **Rodney Haring, PhD, MSW**, Assistant Professor of Oncology in the Office of Cancer Health Disparities Research at Roswell Park.

- 54 students who attend 30 different schools in the Buffalo, NY and Detroit, MI areas competed in RPCI's 3rd annual **Junior Robotic Surgeon Challenge**. Expanding this year with the participation of the **Henry Ford Health System**, the program trains high school students in the basics of robot-assisted surgery using the same curriculum used to train surgeons. The program was designed by **Khurshid Guru, MD**, Vice Chair of the Department of Urology and Director of Robotic Surgery at Roswell Park, and Eileen O'Brien, PhD, of Learning Triangle Labs LLC. Educational partners for the 2016 program were the Albright Knox Art Gallery; Buffalo Zoo; Moog Inc.; Performance Management Partners Inc.; Say Yes to Education; and the University at Buffalo. Additionally, three sponsorship partners provided opportunities for students in need of financial assistance and provided better scholarship opportunities: The Community Foundation for Greater Buffalo; New Era Cap Co.; and the Roswell Park Alliance Foundation.

- **Gov. Andrew Cuomo** came to Roswell Park to announce that a partnership formed during his historic **New York State Trade Mission to Cuba** last year has resulted in a milestone of international collaboration: the launch of a U.S. clinical trial of a Cuban immunotherapy developed by the **Center of Molecular Immunology (CIM)** for lung cancer. RPCI has received authorization from the **U.S. Food and Drug Administration (FDA)** to begin offering the lung cancer treatment vaccine **CIMAvax-EGF®** to a limited number of patients through a clinical trial, making the National Cancer Institute-designated comprehensive cancer center the first American institution to receive FDA permission to sponsor testing of a Cuban medical therapy in the United States. **Grace Dy, MD**, serves as the Principal Investigator of this study. RPCI has also received authorization from the **U.S. Department of the Treasury** to establish a joint business venture with the CIM, which will be the first U.S.-Cuban joint venture licensed to undertake research, development, manufacture and marketing of biotech products. **Dr. Candace S. Johnson, PhD,** President and CEO, as well as **Kelvin Lee, MD**, Jacobs Family Chair in Immunology at Roswell Park, took part in Gov. Cuomo's 2015 trade mission to Cuba. Roswell Park researchers believe that CIMAvax-EGF may one day prove effective in preventing primary lung cancers — and possibly as a treatment for other cancers, such as head and neck, colon, breast, prostate and pancreas cancers.

- Several RPCI faculty leaders took part in the 31st annual meeting of the **Society for Immunotherapy of Cancer (SITC)**—the largest SITC gathering to date. **Elizabeth Repasky, PhD**, Professor of Oncology in the Department of Immunology, the Dr. William Huebsch Professorship in Immunology and Co-Leader of the Cell Stress and Biophysical Therapies Program at the Institute, helped plan and organize the meeting. At the meeting, Dr. Repasky shared insights on basic-to-translational research in immunology at a "Meet the Experts Luncheon," and she also co-chaired two panel discussions. **Dr. Kunle Odunsi** also gave a talk at the meeting. Additional Roswell Park faculty leaders

who participated in SITC 2016 were **Gurkamal Chatta, MD**, Professor of Oncology and Clinical Chair of Genitourinary Medicine; **Marc Ernstoff, MD**, Senior Vice President for Clinical Investigation and The Katherine Anne Gioia Chair of Medicine; **Carl Morrison, MD, DVM**, Executive Director of the Center for Personalized Medicine and Clinical Chief, Department of Pathology & Laboratory Medicine; and **Igor Puzanov, MD, MSCI, FACP**, Director of the Early Phase Clinical Trials Program and Chief of Melanoma.

- **Joan Lunden** was honored at the **26th annual All Star Night**, RPCI's signature black-tie gala, for the extraordinary courage she has shown in the face of her breast cancer battle. The long-time **Good Morning America** host was diagnosed with triple negative breast cancer in 2014 and chose to fight the disease in the public eye in order to spread awareness and hope to as many individuals as possible. Despite understanding the high chance of recurrence for her disease, Lunden faces each new day with bravery and conviction, bringing further encouragement to those who share in the fight against cancer.

    - Also, **Andrei Gudkov, PhD**, the Institute's Senior Vice President of Basic Science, received the **Thomas B. Tomasi, MD, PhD, Hope Award** at All Star Night for his innovative and passionate approach to ground-breaking cancer research. Dr. Gudkov's current studies focus on anti-aging and the effects of radiation on the body, which carry the potential to change how cancer is treated worldwide and, in some cases, prevented altogether.

    - In a poignant tribute, **Kathleen Graim**, was recognized with the **Katherine Anne Gioia Inspiration Award** for her tireless dedication to Roswell Park and the hope she inspires in those fighting cancer. Her leadership of the annual Tops 5k/10k Run and Family Walk as well as her participation in the Empire State Ride — a 500+ mile bicycle journey across New York State — are just two of the ways in which Graim has wholeheartedly dedicated herself to supporting cancer research at Roswell Park while fighting her own personal battle with the disease.

- RPCI's annual **Tree of Hope** lighting ceremony was held on Friday, Dec. 9, from 4:30 to 6:30 p.m. in Kaminski Park and Gardens on the Roswell Park campus. This free, family-friendly event, was held in honor of all who are touched by cancer, and featured holiday activities such as live music, visits with Santa and Mrs. Claus, face painting and a gingerbread house raffle. Guests experienced all the joys of the holiday season at this outdoor event, which was co-sponsored by **WGRZ 2 On Your Side** and **West Herr Automotive Group**. The festivities culminated with the lighting of the Tree of Hope by 9-year-old Alexis, a cancer survivor and member of Carly's Club at Roswell Park.

- RPCI transfuses more than 19,000 blood products each year. Thanks to committed donors, RPCI successfully meets the needs of its patients. Throughout the fiscal year, the **Donor Center at Roswell Park** facilitated more than 1,000 whole blood donations and more than 4,000 platelet donations.

- RPCI released **The Paint Box Project's** 2016 Holiday Line, featuring 13 new designs for customizable holiday cards, gifts, packaging and tableware. As always, pediatric cancer patients and their families designed all of the artwork for the items. Created in 1990 by the **Roswell Park Alliance Community Advisory Board**, The Paint Box Project uses the healing power of art to help young cancer patients and their families express themselves during and after cancer treatment. A portion of the proceeds from the sale of the items benefit quality-of-life programs at RPCI that help address patients' emotional and spiritual needs. The program is made possible through its sponsor Upstate Pharmacy Ltd., and holiday line media sponsors ***The Buffalo News*** and the University at Buffalo Center for the Arts. The children who participate in the program also draw designs for weddings, showers, birthdays and other events.

- Just in time for the holiday season, RPCI, in collaboration with **Tony Walker & Co**, has released a limited-edition necklace that carries powerful affirmations close to the heart of those facing, or those who have faced, a cancer diagnosis. The **"Roswell Strong"** necklace features a four-sided bar pendant inscribed with meaningful messages to inspire and empower: Cancer Warrior, Determined, Brave and Blessed. Fifty percent of the purchase price from each necklace will benefit cancer research and compassionate quality-of-life programs at Roswell Park.

- **NHL.com** released a story highlighting a mannequin challenge video taken while the **Buffalo Sabres** team visited with patients at RPCI. The Sabres team split into groups to take two separate videos, which were shared on Roswell Park's Facebook page, asking followers "who did it better?" The videos feature players and staff from the Buffalo Sabres as well as Institute staff and pediatric patients from **Carly's Club at Roswell Park** as they enjoyed a holiday ice cream social held in the lobby of the Scott Bieler Clinical Sciences Center.

- The **6th Annual Cruisin' for a Cure** prostate screening event and car show took place on Saturday, Sept. 24. Of 127 individuals who received prostate cancer screening, 49% identified as African-American, 35% identified as white, 15% identified as "other." Screening participants came from across WNY, with 57% from the City of Buffalo, 23% from the Northtowns, 15% from the Southtowns and 5% from other locations. This event is presented by **West Her Automotive Group** in conjunction with **Men Allied for the Need to Understand Prostate Cancer (MANUP)** and RPCI.

- The **Erie County Sheriff's Office** and **Buffalo Police Department** snipped, clipped and shaved their way to cancer cures, raising a collective **$39,400** to support cancer research and patient-care programs at RPCI through the **Goin' Bald for Bucks** program. More than 250 City of Buffalo Police Officers and 280 Erie County Sheriff Deputies grew out their beards to raise funds for the fight against cancer. Community members, local businesses and other members of their departments made additional donations to both groups.

- **The Ride For Roswell** presented by **West Herr Automotive Group** launched registration for its 2017 event, taking place on Saturday, June 24. Community members of all ages and cycling experience were invited to "choose your route to a cure" by signing up to

ride or volunteer at RideForRoswell.org. The 2017 fundraiser will feature 12 routes ranging from three to 102 miles, including two new route options that will both depart from the RPCI campus: a leisurely-paced **14-mile "RosRoll"** that will tour along iconic downtown Buffalo landmarks and a **26-mile Canada route**, a shorter version of The Ride's popular 44-mile Canada route that ends in Niagara Falls, USA before riders are shuttled to UB for the finish line celebration. Everyone has been touched by cancer in some way, and The Ride provides an opportunity for the entire community to come together and fight back against this devastating disease.

- **New York Governor Andrew Cuomo**'s plan to regulate and tax vapor products used in electronic cigarettes is an important step in protecting youth and nonusers from possible detrimental impacts, say experts from RPCI and **Tobacco-Free Western New York (TFWNY)**. The policy changes proposed as part of Gov. Cuomo's 2017-2018 Executive Budget include a clear signal that protecting youth and adults from the dangers of nicotine exposure and the cancer-causing agents in e-cigarette emissions is a priority for the state, these cancer researchers and public health advocates say. **Andrew Hyland, PhD**, Chair of the Department of Health Behavior a t Roswell Park noted that experts have recommended tax policies that are based on the relative harms from different tobacco products, and the governor's proposal is driven by these potential impacts. **Anthony Billoni**, Director of Tobacco-Free Western New York commended Governor Cuomo on his plan to regulate vapor products used in electronic cigarettes.

- RPCI has expanded its breast cancer navigation program due, in part, to a new contract from **Gov. Andrew Cuomo's Breast Cancer Patient Navigation Project**. RPCI received the funding to expand services to enable women from underserved communities, regardless of their insurance status, to navigate the healthcare system and complete breast cancer screening through mammograms or other recommended breast imaging technologies. **The National Accreditation Program for Breast Centers (NAPBC) Patient Navigation Project** is one of a number of programs that are part of New York State Governor Cuomo's statewide initiative to **increase breast cancer screening by 10%** over the next five years. Patient navigators serve as personal health care guides, maintaining one-on-one relationships with patients and their families. **Ermelinda Bonaccio, MD**, Clinical Chief of the Breast Imaging Center at Roswell Park noted that this project proactively reaches underserved women who are most in need of greater access to screening services, providing a critical link to local resources that will improve their quality of life, and potentially save lives.

- RPCI launched a new series of **podcasts titled, "Cancer Talk"** to offer cancer information to patients, their families and the public. Roswell Park is working in partnership with Radio MD, a nationally recognized podcast service, to create 10-20 minutes on-demand episodes. Roswell Park experts will share content focusing on what patients can expect during treatment, coping tips, cancer research and news, screening and prevention options and more. The initial episode features **Candace S. Johnson, PhD**, President and CEO of Roswell Park, offering insights into what is on the horizon for Roswell Park in 2017. The podcasts are available for download on RPCI's website and by free subscription at **iTunes** and **iHeartRadio**.

- RPCI encourages opportunities for minority business enterprises (MBE), woman-owned enterprises (WBE), small businesses and other disadvantaged business programs. During this fiscal year, RPCI purchased **50.8 percent** of Institute-procured goods and services from minority- or women-owned business enterprises **(MWBE)**. This is a **15.1 percent increase** over the previous fiscal year.

- The mission of the **RPCI Office of Cancer Health Disparities Research (OCHDR)** is to ensure that all cancer patients and communities in Western New York can benefit from the clinical and scientific advances accomplished at RPCI. We know that certain populations bear a greater burden from cancer than others and this often includes low socioeconomic groups, minorities and underserved populations. The OCHDR team is dedicated to research aimed at understanding cancer health disparities and to developing community-based services and educational programs tailored to meet the needs of populations most at risk for cancer diagnosis and mortality.

    - This fiscal year, the OCHDR team **reached nearly 4,000 people** through more than **250 culturally appropriate education, outreach and engagement activities**; 83% of those engaged were minorities.

    - A substantial focus was placed on **navigation to cancer screening** and in calendar year 2017, alone, 99 mammograms were completed at RPCI through the OCHDR's efforts. In addition, 127 men were screened for Prostate cancer based on the work of the Office.

    - The team focused on people of all ages in its target community. An **in-school education** program was conducted to share information on breast cancer research, engaging 87 8th grade students, of whom 90% were African American. This was a result of a partnership with **Tapestry Charter School** to enhance the school's science curriculum.

    - Also, three **cancer education trainings** were held for staff and volunteers at Native American Community Services.

    - RPCI staff also participated in three community-based education programs featuring information on **healthy lifestyles and Native culture**.

    - The **National Witness Project**, housed at RPCI, is celebrating its 25th year of continued outreach and education to African American women on breast and cervical cancers in faith-based settings.

- During this fiscal year, the **Office of Diversity & Inclusion** held 12 **Resume Writing** classes in the community (six at UB Gateway, four at the Moot Center and two The Belle Center of WNY) – 66 people attended these classes and seven people were hired at RPCI after attending. In addition, the Office of Diversity & Inclusion participated in **community job fairs** at the Buffalo Employment and Training Center, BUILD of Buffalo, The International Institute, Delevan-Grider Community Center, True Bethel Baptist Church and University at Buffalo Educational Opportunity Center – 31 people were hired from these fairs. To increase its outreach efforts, the Office of Diversity & Inclusion also

collaborated with the Office of Cancer Health Disparities Research to write **advertorials in the diversity newspapers** including ***Panorama Hispano News***, ***The Challenger*** and the ***Criterion***.

- The first experience many of our patients have with Roswell Park is visiting the Institute's website. In calendar year 2016, our **Online Faculty Directory** was viewed more than 13,400 times, averaging about 4,600 pageviews per month. Faculty Directory bios were further enhanced this year with videos, graphics denoting which of our doctors were named to **Castle Connolly's Top Doctors 2017** list and **Twitter** handles. These enhancements improved patients' experiences and interactions with Roswell Park online at **RoswellPark.org**.

- An **Open House** was held in **Roswell Park's Survivorship & Supportive Care Center** for cancer survivors, faculty and staff. Attendees were able to learn more about featured areas of the center, including: Supportive and Palliative Care, Pain Management, Survivorship, Endocrinology, Clinical Nutrition, Psychosocial Oncology, Rehabilitation Services and Pastoral Care. Internal audiences were able to get refreshers on how to make referrals to the services that the center offers, while cancer survivors were invited to tour the center, experience Healing Touch and speak with various providers.

- The **Yroswell Street Team** brought the message of cancer awareness to the community, especially Western New York's young people, at **41 events**. The Institute also encouraged young people throughout the area to find out about the resources they need to become the next generation of cancer professionals and advocates. Events that the Street Team participated in and brought awareness information to, included: various events for The Ride For Roswell (including the Celebration of Hope and fundraising initiatives), many WNY high school and middle school wellness fairs, RPCI's Employee Appreciation Day, Making Strides Against Breast Cancer Walk, Komen Run/Walk, Tree of Hope, the RPCI Junior Robotic Surgeon Challenge Program, Hockey Fights Cancer Night at KeyBank Center, Kissmas Bash, BNMC Student Open House and more.

- The RPCI community, and beyond, mourned the loss of **Enrico (Henry) Mihich, MD**, and **Edwin A. Mirand, PhD, DSc**. Both individuals made a tremendous impact at Roswell Park. Remembrance services invited national colleagues to Buffalo to pay their respects. The RPCI community also remembers several employees who passed, as well as **Edward J. Sarcione, PhD**.

- RPCI provided sponsorship of the **American Lung Association's Fight for Air Climb** of Buffalo. A group of **28 employees** participated in the event, raising nearly **$8,000** before climbing 37 flights of stairs at the annual event.

- Thirty-four Roswell Park employees participated in the **Undy Run/Walk**. In addition, a table of educational information was available to all participants of this event. Organized by the Colon Cancer Alliance, the Undy Run raises awareness within the Western New York community about colon cancer screening and prevention.

- Led by **Dr. Ermelinda Bonaccio, Director, Mammography**, and other members of the Roswell Park Breast Cancer Team, Roswell Park employees joined Team Roswell at breast cancer awareness events throughout the summer and fall of 2016, including the Susan G. Komen Race for the Cure (28 Team Roswell members), American Cancer Society Making Strides Against Breast Cancer Walk (150 Team Roswell/Bosom Buddies members). Each event raised awareness and funds for breast cancer detection, treatment and research.

- Roswell Park had another large presence at the JP Morgan Corporate Challenge race in Buffalo with a **team of 120 employees**. In addition, Roswell Park once again created inspiring t-shirts for Team Roswell members to wear with pride.

- Roswell Park's blog – **RPCI Cancer Talk** – features various Roswell Park experts discussing the latest advances in cancer detection, prevention, research and treatment, often in video format. The blog gives viewers an inside perspective on what's new in cancer care, introducing them to Roswell Park's physicians and researchers, and offers inspiring stories of survival, nutrition tips and survivorship resources. 157 blogs were posted, with approximately 454,238 total unique page views in fiscal year 2017.

    - Additionally, the blog brought attention to: National Nutrition Month, National Cancer Control Month, immunotherapy, personalized medicine, the contributions of African Americans to the field of cancer research, adolescent and young adult cancer, and National Volunteer Week, among many other topics.
- The Neuroendocrine Tumor (NET) Patient Regional Meeting was held on October 29 as an afternoon of networking and support for the more than 100 NET patients and their caregivers in attendance. Led by **Renuka Iyer, MD**, Co-Director, Liver and Pancreas Center and Section Chief for Gastrointestinal Oncology, the event also included presentations by **Boris Kuvshinoff, MD, MBA**, Chief Medical Officer and Director, Liver and Pancreas Center, **Nicoleta Voian, MD, MPH**, Assistant Professor of Oncology and Director, Clinical Genetics Service and **Srinevas Reddy, MD**, Associate Professor of Oncology.

- Roswell Park continued its partnership with the **Buffalo Sabres (**One Team, One Goal: Together to Beat Cancer) in an effort to reduce cancer risk among the team's fans.

- Through the bi-weekly ceremonies held by Roswell Park, more than 100 patients, survivors and families have visited the **Bridge of Hope** at Canalside to hang bells in honor of their survivorship or in memory of a loved one.

**Denotes faculty and staff who are no longer employed at RPCI.*