**Fiscal Year 2016 (April 1, 2015 – March 31, 2016) Accomplishments**

***Awards***

- Roswell Park Cancer Institute (RPCI) and Jamestown Medical Oncology Hematology, RPCI Oncology PC (JMOH) independently earned an important national recognition, achieving certification through the **Quality Oncology Practice Initiative (QOPI)**, a voluntary quality-improvement program of the **American Society of Clinical Oncology (ASCO)**. The distinction affirms that the outpatient medical oncology services at both the comprehensive cancer center and JMOH, an RPCI community practice in Jamestown, N.Y., meet nationally recognized standards for quality cancer care.

- For the fifth consecutive year, the superior clinical care provided by the **Blood and Marrow Transplant Program** at RPCI was recognized by the **Center for International Blood and Marrow Transplant Research (CIBMTR)**. The CIBMTR's report showed that RPCI continues to achieve higher than expected one-year survival ratings for allogeneic blood and marrow transplants.

- RPCI's accreditation by the **Foundation for the Accreditation of Cellular Therapy (FACT)** was renewed. FACT is an internationally recognized accrediting body for hospitals and medical institutions offering cellular therapy. The designation, which applies to allogeneic and autologous transplant services for both adult and pediatric patients, indicates that an institution has met the most rigorous standards in every aspect of cellular therapy, from clinical care and donor management to cell collection, processing and storage. Roswell Park has held FACT accreditation continuously since 2002.

- In the first quarter of the year, 17 of the most promising preliminary cancer research projects at RPCI received more than **$1 million in funding** generated by donations and fundraising events. The researchers received the funds following an internal, peer-reviewed competitive process that is led by the **Roswell Park Alliance Foundation**, the not-for-profit that raises funds and manages all donations made to RPCI.

  The grant awardees and descriptions of the funded research projects are as follows:

  **Dr. Andrei Gudkov**, PhD, DSci, Senior Vice President of Basic Science and Garman Family Chair in Cell Stress Biology, received $85,000 for a project to test whether two drugs could treat the harmful damage that results from using toxic cancer treatments in pediatric cancer patients.

  **Eugene Yu, PhD**, Professor of Oncology in the Department of Cancer Genetics, received $100,000 for a project to determine if specific genetic mutations cause the spread of synovial sarcoma, one of the most common solid tumors in children, adolescents and young adults. The project could lead to identifying genetic mutations that could be targeted with more effective treatments.

  **Asoke Mal, PhD**, Assistant Professor of Oncology in the Department of Cell Stress Biology, received $99,927 to investigate the influence of a specific gene on the progression of an aggressive form of pediatric muscle cancer. The study may provide information that is needed to develop more beneficial treatments for the disease, which has a poor prognosis and does not

respond well to available therapies.

**Xinjiang Wang, PhD**, Assistant Professor of Oncology in the Department of Pharmacology and Therapeutics, received $85,000 to test whether a newly identified drug could kill lymphoma cells in pediatric patients that have become resistant to chemotherapy. The new therapy could prevent recurrence of the disease and significantly improve patients' survival rates.

**Danuta Kozbor, PhD**, Associate Professor of Immunology and Microbiology, received $85,000 to investigate whether a novel compound could boost the efficacy of a vaccine to inhibit the spread of neuroblastoma, the most frequent solid tumor in children above the age of one. The project has been developed in collaboration with **Barbara Bambach, MD**, Associate Professor of Oncology in the Department of Pediatrics at RPCI.

**Grace Dy, MD**, Associate Professor of Oncology in the Department of Medicine, received $50,000 for her project, "*Molecular mechanisms of host-mediated resistance to targeted therapy in patients with NSCLC.*"

**Andrei Bakin, PhD**, Assistant Professor of Oncology in the Department of Cancer Genetics, received $50,000 for his project, "*Ribosome biogenesis and nuclear stress in breast cancer aggressiveness*."

**Bora Baysal, MD, PhD**, Associate Professor of Oncology in the Department of Pathology and Laboratory Medicine, received $50,000 for his project, "*Structural determinants of RNA editing by APOBEC3A cytidine deaminase.*"

**John Ebos, PhD**, Assistant Professor of Oncology in the Department of Medicine, received $50,000 for his project, "*Soluble PD-L1 as a surrogate biomarker of cancer and cancer therapy.*"

**Gokul Das, PhD**, Associate Professor of Oncology in the Department of Pharmacology and Therapeutics, received $50,000 for his project, "*Therapeutic implications of mutant p53-estrogen receptor-beta signaling crosstalk in serous ovarian cancer.*"

**Elizabeth Griffiths, MD**, Associate Professor of Oncology in the Department of Medicine, received $50,000 for her project, "*Targeting the immune checkpoint PD-L1 to enhance decitabine efficacy in AML."*

**David Goodrich, PhD**, Interim Chair of the Department of Pharmacology and Therapeutics and Professor of Oncology, received $50,000 for his project, "*A new model for understanding prostate cancer metastasis.*"

**Leigh Ellis, PhD**, Assistant Professor of Oncology in the Department of Pharmacology and Therapeutics, received $50,000 for his project, "*Identifying genetic drivers of aggressive prostate cancer.*"

**Eric Kauffman, MD**, Assistant Professor of Oncology in the Departments of Urology and Cancer Genetics, received $50,000 for his project, "*Is iron the elusive 'missing ingredient' for human clear cell renal cell carcinoma tumorigenesis?*"

**Maansi Bansal-Travers, PhD, MS**, Assistant Professor of Oncology in the Department of Health Behavior, received $50,000 for her study, "*Promotion of low-dose CT for lung cancer screening among smokers calling a quitline.*"

**Richard O'Connor, PhD**, Professor of Oncology in the Department of Health Behavior, received $49,581 for his project, "*Developing human laboratory assessments of tobacco product substantial equivalency.*"

**Zhihong Gong, PhD**, Assistant Professor of Oncology in the Department of Cancer Prevention and Control, received $50,000 for her project, "*Circulating miRNAs as a biomarker for breast cancer diagnosis and prognosis by race.*"

- **Cleveland BioLabs, Inc.** (NASDAQ:CBLI) and RPCI announced the award of a three-year, $1.2 million Breast Cancer Research Program Breakthrough Award to Roswell Park from the **Department of Defense Congressionally Directed Medical Research Program** for research into the immunotherapy of metastatic breast cancer with entolimod, a toll-like receptor 5 (TLR5) agonist. A Phase 1 open-label, dose-escalation trial of entolimod in patients with advanced cancer was completed in September 2014 at RPCI. Findings were presented during the Developmental Therapeutics – Immunotherapy poster session at the ASCO 2015 annual meeting. A second Phase 1 study of entolimod in patients with advanced cancer is enrolling in the Russian Federation to expand upon clinical observations made at the higher dose levels in the RPCI study and to gather further statistics on immune response to administrations of entolimod. **Andrei Gudkov, PhD, DSci**, Senior Vice President of Basic Science at RPCI and Chief Scientific Officer of Cleveland BioLabs, is Principal Investigator on the grant.

- **Steven de Boer, MSc, FAAPM**, was awarded a Fellowship of the American Association of Physicists in Medicine (AAPM). Dr. de Boer is a senior medical physicist in the Department of Radiation Medicine, where he has practiced for more than 15 years. The honor of Fellowship is bestowed upon AAPM members who have distinguished themselves through service to the organization; participation in medical physics education activities; contribution to the education and training of medical physicists, medical students and allied health personnel; and demonstration of significant leadership in the practice of medical physics. There are currently approximately 8,500 members of the AAPM worldwide, of which only about 430 have been awarded Fellowship throughout the past 50 years.

- RPCI received a prestigious **New York Emmy®** for the video "Cancer Can't Win – Strong." The video is one segment of a three-part documentary that aired in primetime in three New York state markets in autumn 2014. This video episode tells the story of two Roswell Park patients' cancer journeys. The Roswell Park documentary was one out of four candidates in the Health/Science: Program/Special category. RPCI also was nominated for another segment, "Cancer Can't Win – Dreams." The **RPCI Marketing** team collaborated on the documentary series with MediaSource, a media relations and content production firm located in Columbus, Ohio.

- The community service contributions of **Wesley L. Hicks, Jr., MD, FACS**, Chair, Department of Head & Neck/Plastic & Reconstructive Surgery and **David Scott**, Director, Office of Diversity & Inclusion were recognized by the **Mary B. Talbert Civic and Cultural Club** at the organization's annual fundraising dinner, for their reputation as innovators, visionaries and role models. This

year's event honored a total of nine health care professionals with the theme of "Taking Care of the Community."

- RPCI multimedia projects were recognized for excellence by several organizations from the communications industry. These include a Bronze Award in the 36th annual **Telly Awards** for "It's All About Tomorrow," a Ride For Roswell original song production/music video. The song is also available for download on iTunes, with proceeds benefiting cancer research at Roswell Park.

- RPCI received two Gold Awards in the 2015 **AVA Digital Awards** competition, an international contest hosted by the **Association of Marketing and Communication Professionals (AMCP)** that recognizes excellence by creative professionals responsible for digital communications. The Gold Awards were given to: "It's All About Tomorrow," for creativity in video production, and to "Compassionate Care" for video production/corporate image.

- Cindy Eller, the Executive Director of the Roswell Park Alliance Foundation, has been named the 2015 winner of the Lisa Considine Service Award. This prestigious award, given by the **National Association of Cancer Center Development Officers (NACCDO)**, recognizes Eller for her commitment to collaborating with and mentoring her colleagues from other cancer institutions. Pat Mulvey, Vice President for Development at M.D. Anderson Cancer Center and Chair Emeritus of NACCDO, presented the award to Eller at the annual NACCDO meeting in May.

- RPCI received $6.19 million in research grant funding, including a five-year, $2.01 million NCI grant to **Xuefang Cao, MD, PhD,** Associate Professor in the Department of Immunology. Dr. Cao's work aims to help develop new intervention strategies to improve effectiveness of bone-marrow transplantation, a therapy for treating leukemia, lymphoma and other blood cancers.

  Other awardees and research to be funded are:

  **Kenneth Gross, PhD,** Chair of the Department of Molecular and Cellular Biology, received a five-year, $1.3 million subcontract award from the University of Washington, part of a larger award from the National Institute of Diabetes and Digestive and Kidney Diseases. The project proposes to prove that in proteinuric glomerular diseases, the leading cause of chronic and end-stage kidney disease, juxtaglomerular cells serve as progenitors for restoring glomerular epithelial cell number.

  **Jianmin Zhang, PhD,** Assistant Professor of Oncology in the Department of Cancer Genetics, received a four-year, $792,000 grant from the American Cancer Society to study the negative role of the PTPN14 gene on the oncogenic protein YAP in cancer. This work will lead to a better understanding of the effects of YAP tyrosine modification on tumor formation and metastasis.

  **John Blessing, PhD,** Executive Director for the NRG Oncology Buffalo Statistical and Data Management Center (SDMC), received a one-year, $530,268 subcontract grant from the NRG Oncology Foundation, part of a larger award from the NCI, to provide statistical, administrative, information-technology and data-management expertise for NCI Community Oncology Research Program (NCORP) clinical trials.

  **Takemasa Tsuji, PhD,** Assistant Professor of Oncology in the Center for Immunotherapy, received the Liz Tilberis Early Career Award, a three-year grant for $450,000 from the Ovarian

Cancer Research Fund (OCRF). His project will investigate the antitumor functions of a novel subset of CD4+ helper T cells that have the potential to significantly enhance the effects of cancer immunotherapy.

**Todd Demmy, MD, FACS,** former Clinical Chair of the Department of Thoracic Surgery and Professor of Surgery at the School of Medicine and Biomedical Sciences at the University at Buffalo (UB), received a five-year, $375,095 subcontract grant from the University of Pennsylvania, part of a larger award from the NCI for "Biological mechanisms involved with PDT in the treatment of MPM." Photodynamic therapy (PDT) was invented at RPCI to kill superficial cancers by using a laser light to activate a drug taken up by the tumor cells.

**James L. Mohler, MD,** Associate Director for Cancer Center Support, Senior Vice President for Translational Research and Chair of the Department of Urology at RPCI and Professor of Urology at the School of Medicine and Biomedical Sciences at UB, received a five-year, $195,510 subcontract award from Cedars-Sinai Medical Center, part of a larger R01 project funded by the NCI. The project seeks to test a molecular signature for indolent prostate cancer that seeks to allow men to choose active surveillance instead of active therapy, and to observe their prostate cancer with increased confidence that they will neither require treatment nor ever suffer from their disease.

**Angela Omilian, PhD,** Scientific Director of the Pathology Resource Network, received a one-year award for $175,000 from the NCI for the purchase of a state-of-the-art automated platform for immunohistochemistry assays. The Dako Omnis Autostainer will allow screening of tumor tissues for biomarkers for cancer diagnosis, staging and therapeutic intervention with an unprecedented level of accuracy, quality and standardization.

**Lynda Kwon Beaupin, MD,** Assistant Professor of Oncology in the Department of Pediatric Hematology/Oncology and Director of the Adolescent and Young Adult Program, received a one-year, $80,000 grant from Hyundai Hope on Wheels to lead the development of the Consortium of Adolescent and Young Adult Cancer Centers (CAYACC), a national database of young adult cancer patients and survivors.

**AJ Robert McGray, PhD,** a Research Affiliate in the Center for Immunotherapy, received the Ann Schreiber Mentored Investigator Award, a two-year, $75,000 grant from the Ovarian Cancer Research Fund (OCRF) to investigate how to effectively combine two emerging immunotherapies, oncolytic virotherapy and adoptive T-cell transfer (ACT), for the treatment of advanced and metastatic ovarian cancers, focusing on identifying strategies that lead to a long-lasting tumor attack by transferred T cells, as well identifying mechanisms used by tumors to evade recognition and destruction by the immune system.

**Kelvin Lee, MD,** the Jacobs Family Chair in Immunology and Research Professor of Microbiology at the UB School of Medicine and Biomedical Sciences, received a two-year, $42,000 grant from Onyx/Amgen Inc. to study the use of protease inhibitors to reverse hypersensitivity of peanuts. This work stems from the Lee lab's observation that therapies that are effective in treating multiple myeloma may also be effective in reversing and eliminating life-threatening allergies to everyday items like peanuts.

**Kunle Odunsi, MD, PhD, FRCOG, FACOG,** Deputy Director and Executive Director of the Center for Immunotherapy and Professor of Gynecology & Obstetrics at the School of Medicine and

Biomedical Sciences at UB, received $24,256 to evaluate inflammatory cytokine levels in ovarian cancer patients as the Translational Research Co-Chair of a recently completed Gynecology Oncology Group multicenter phase I clinical trial. Patients enrolled in the trial received a novel immunotherapeutic agent designed to activate anticancer immune responses with a single local injection rather than systemic therapy. Determining inflammatory cytokine levels will serve to develop new clinical trials combining immunotherapy and standard chemotherapy.

- **James Mohler, MD**, Associate Director and Senior Vice President for Translational Research and Chair of the Urology Department at RPCI, received the **2015 Urology Care Foundation Distinguished Scholar Alumnus Award** from the **American Urological Association (AUA)**. The award was presented at the annual meeting of the AUA, held in New Orleans. The Urology Care Foundation Distinguished Scholar Alumnus Award is given to an individual who makes significant contributions to the field of urology. Dr. Mohler is world-renowned for his career-long contributions to urologic research, especially in the field of prostate cancer. He has led a laboratory effort and the largest population-based study of newly diagnosed prostate cancer patients.

- RPCI faculty member and researcher **Rodney Haring, PhD, MSW**, Assistant Professor of Oncology, has been named to a federal advisory panel that makes recommendations on ways to reduce health disparities among federally recognized American Indian and Alaska Native communities. Dr. Haring, a member of the Seneca Nation, was appointed as an at-large delegate to the **American Indian and Alaska Native Health Research Advisory Council (HRAC)**, which works with tribal leaders to set priorities and make recommendations to U.S. Department of Health and Human Services (HHS) leadership regarding Native health programs and policies. The recipient of an **Academy Health/Aetna Foundation Scholar in Residence Fellowship** for 2015, he is also a National Congress of American Indians scholar and an adjunct faculty member at the Native American Research and Training Center at the University of Arizona. A member of the Beaver Clan, Dr. Haring is an enrolled citizen of the Seneca Nation of Indians and resides on the Cattaraugus Indian Reservation with his family.

- The **American Surgical Association (ASA)**, the nation's oldest and most prestigious academic society for surgeons, recently elected Roswell Park's **Steven Hochwald, MD, FACS**, Chief of Gastrointestinal Surgery, as a new Fellow. This membership gives Dr. Hochwald an honored seat at the table of the most prominent surgeons from the country's leading academic medical institutions. Founded in 1880, the ASA's mission as the premier organization for surgical science and scholarship is to promote excellence, innovation and integrity in science, education, and patient care.

- **David Scott**, Director of Diversity and Inclusion at Roswell Park, was recognized by the **Educational Opportunity Center (EOC) at the University at Buffalo**. He received the Friend of the EOC award, which is presented to an individual or organization that has demonstrated keen understanding and outstanding support of the mission of the Buffalo EOC, the UB student body and the community that the EOC serves. Scott was honored for a long history of commitment to ensuring that minority students reach their potential and for his tireless efforts in obtaining clinical equipment for students. His work with the Instructional Services Unit exemplifies his commitment to the mission of the Buffalo EOC.

- **Vishala Neppalli, MD**, Assistant Professor of Oncology in the Department of Pathology and Laboratory Medicine, was honored as a mentor for a second consecutive year with an **American Society of Hematology (ASH) Visitor Training Award**. The purpose of the ASH program is to help build hematology capacity in developing countries, ultimately improving patient care. Hematologists or hematology-related health care professionals receive funding for up to 12 weeks of training from an ASH member and then return to their home institution to implement the skills and knowledge they have acquired. The role of mentors is to identify, develop and implement need-specific training modules for the participants. Dr. Neppalli offers the program in collaboration with her colleagues, George Deeb, MD (formerly of RPCI); **Paul Wallace, PhD**; **AnneMarie Block, PhD, FACMG**; and **Sheila Sait, PhD**, and the laboratory technologists from those clinical laboratories. In the upcoming year, Dr. Neppalli will serve as a mentor to two pathologists from India: Dr. Jangbhadur Singh Sarna from Sher-i-Kashmir Institute of Medical Sciences, Kashmir, India, and Dr. Faiq Ahmed from Indo-American Cancer Hospital and Research Institute, Hyderabad, India.

- **Candace S. Johnson, PhD**, RPCI's President & CEO and Wallace Family Chair in Translational Research, was honored with a Women of Influence Lifetime Achievement Award from *Buffalo Business First.* The award recognizes Dr. Johnson's professional success and community involvement. In accepting her award, Dr. Johnson discussed what it was like for her to go from being the only female in her class to become a scientist and also the only female student in her doctoral program at The Ohio State University, to being named RPCI's first woman CEO in our Institute's 117-year history. She also described not having many female role models in her career and how this has instilled in her a passion to mentor young professionals, both women and men.

- RPCI has received continuation of a prestigious program project grant from the **NCI** for research through the **Roswell Park Photodynamic Therapy Center**. The comprehensive cancer center will receive $10 million over the next five years to continue its research program on PDT — specifically in head and neck cancers — under the direction of **Sandra Gollnick, PhD,** of the Department of Cell Stress Biology and Director of the Photodynamic Therapy Center. PDT is a unique FDA-approved cancer treatment developed at Roswell Park that combines light-sensitizing drugs with laser light. At Roswell Park, PDT is offered as a treatment option for many skin, lung and esophageal cancers as well as Barrett's esophagus and other precancerous conditions.

- Targeted immunotherapy offers promise for metastatic cervical cancer, according to **Kunle Odunsi, MD, PhD**, Cancer Center Deputy Director, Executive Director of the Center for Immunotherapy, and Chair of the Department of Gynecologic Oncology at RPCI. Dr. Odunsi offered this opinion in an editorial published by the *Journal of Clinical Oncology*. Co-authors for the commentary are **Emese Zsiros, MD, PhD**, Department of Gynecologic Oncology and **Takemasa Tsuji, PhD**, Center for Immunotherapy at RPCI. Dr. Odunsi and colleagues offered insight into research conducted by Christian Hinrich, MD, Assistant Clinical Investigator, Center of Cancer Research at the NCI. The pilot study found immunological responses from nine women diagnosed with metastatic cervical cancer who were treated with re-engineered cancer-fighting T cells.

- Several RPCI faculty members received significant grant funding in the second quarter of 2015 to support research projects to develop new therapeutic approaches or overcome barriers to

effective treatment and prevention. Totaling nearly **$10 million**, the grants will fund investigations of new approaches for ovarian and metastatic breast cancers, targeted and immune-based therapies, genetics and more.

Two projects headed by **Deborah Erwin, PhD**, Director of the Office of Cancer Health Disparities Research, both funded by **Susan G. Komen® Western New York**, aim to make an immediate impact on low-income and/or minority women Western New York. The grants, totaling more than $276,000, will focus on early breast cancer detection toward the goal of eliminating cancer health disparities among Latina, African-American, lower-income, rural and other medically underserved women.

Dr. Erwin was awarded a one-year **Komen WNY** grant of $77,182 to provide culturally tailored education to 700 women, and to provide navigation services to 425 eligible women for breast exams, mammograms, transportation assistance, translation services and follow-up assessment. The second grant, a two-year award for $199,474, funds culturally appropriate services to women whose breast imaging revealed abnormal findings. This project helps women receive timely clinical services such as biopsy and treatment planning, and provides navigation through treatment and survivorship.

Other awardees and projects funded during the second quarter of 2015 are:

**Brahm Segal, MD**, Chief of Infectious Diseases and Professor of Oncology in the Department of Immunology, and **Kirsten Moysich, PhD**, Professor of Oncology in the departments of Cancer Prevention and Control and Immunology, received a five-year, $3.15 million award from the **NCI** to study immune responses in women with ovarian cancer and identify biomarkers to predict response to therapy. In doing so, the researchers hope to pinpoint those women who are less likely to benefit from traditional ovarian cancer treatment and those who might be candidates for investigational treatments. This research may also identify new targets for immunotherapy. This project benefitted from an $11 million ovarian cancer **Specialized Program of Research Excellence (SPORE)** grant from the NCI, jointly held by RPCI and the **University of Pittsburgh Cancer Institute (UPCI)**. Dr. Segal was awarded a SPORE Developmental Research Project, which enabled the team to generate key preliminary results that contributed to the success of this application.

**Aimin Jiang, PhD**, Assistant Member of the Department of Immunology, received a five-year, $2.01 million grant from the NCI to investigate the role of the protein beta-catenin in adversely affecting the antitumor immunity induced by cancer vaccines and develop new strategies to improve the efficacy of cancer vaccines, potentially leading to improved vaccination options.

**William Cance, MD, FACS**, former Surgeon-in-Chief and Chair of the Department of Surgical Oncology, received a five-year, $1.78 million renewal of grant funding from the **NCI** to continue his research into the role of focal adhesion kinase (FAK) in human cancer invasion and metastasis. FAK is emerging as a major therapeutic target in cancer, and Dr. Cance's group is actively developing new drugs to treat a wide variety of cancers.

**Andrei Gudkov, PhD, DSci**, Senior Vice President of Basic Science and Chair of the Department of Cell Stress Biology, received a three-year, $1.2 million **Breast Cancer Research Program Breakthrough Award from the Department of Defense Congressionally Directed Medical Research Program** to assess treatment of metastatic breast cancer with entolimod, a

proprietary investigational drug developed by **Cleveland BioLabs Inc.** Current therapies against metastatic breast cancer have limited success and significant toxicities. Entolimod is a targeted therapy that activates immune responses and mobilizes immunocytes to organs and tumors that express entolimod's target, TLR5, and has shown preclinical potential for treating metastatic disease, including liver metastases. A Breakthrough Award is intended to support promising research that has potential to lead to or make breakthroughs in breast cancer therapy.

**Kevin Eng, PhD**, Assistant Professor of Oncology in the Department of Biostatistics and Bioinformatics, received a three-year, $501,839 career development award from the **National Institutes of Health (NIH)** to further develop methods to analyze the immunological and genomic data collected in ongoing immunotherapy trials conducted at RPCI. Dr. Eng and colleagues expect that these data and methods will allow them to better characterize the immune response to cancer, how tumors respond to immune-targeting therapies and the mechanisms that allow cancer to evade targeted treatments.

**Eugene Yu, PhD**, Professor of Oncology in the Department of Cancer Genetics, received a two-year, $473,850 award from the National Institute of General Medical Sciences to use genome sequencing to establish and analyze the models mimicking the genetic alterations identified in patients enrolled in the National Institutes of Health Undiagnosed Disease Program. Through this project, Dr. Yu hopes to determine the impact of these genetic alterations on human diseases.

**Tracey O'Connor, MD**, Associate Professor in the Department of Medicine, received a four-year, $287,817 subcontract award, part of a larger grant to the University at Buffalo from the National Institute of General Medical Sciences to examine how a patient's inherited ability to break down a class of chemotherapy drugs called anthracyclines may influence the side effects to be expected. Looking at enzymes that metabolize anthracyclines, the study aims to determine whether an individual's inherited pattern of enzymes influences the development of heart muscle dysfunction, an uncommon but important side effect of these drugs.

**Theresa Hahn, PhD**, Professor of Oncology in the Department of Medicine, and **Lara Sucheston-Campbell, PhD**, former Associate Professor of Oncology in the Department of Cancer Prevention and Control, received a two-year award for $175,500 from the NCI to investigate the role of inherited genetic variations in contributing to the development of certain leukemia types. The research aims to validate and extend the known genes associated with risk for acute lymphoblastic leukemia and provide the first evidence of genetic risk for acute myeloid leukemia, findings that could provide information for better knowledge of the risk of acute leukemia and potential tests for screening.

**Michael Nemeth, PhD**, Assistant Member of the departments of Medicine and Immunology, received a one-year award of $100,000 from the **Leukemia Research Foundation** for his investigations into how the cellular environment that supports the growth and survival of acute myeloid leukemia cells alters the effectiveness of chemotherapy agents used to treat this disease. Identifying processes by which the cellular environment protects leukemia cells opens up the potential for developing new approaches for improving treatment of patients with blood cancers.

- **Toru Ouchi, PhD**, Professor of Oncology in the Department of Cancer Genetics at RPCI, was selected as an **Osaka University Global Alumni Fellow**. The award was presented by the

President of Osaka University, Dr. Toshio Hirano, on Saturday, July 25, at the Japan Club in New York City. Dr. Ouchi, a graduate of the Osaka University School of Medicine, is recognized for his significant achievement in cancer genetics. With this lifetime post, Fellows are expected to continue their work and contribute to Osaka University's activities outside Japan. Individuals also must hold a full professorship at an academic institution. Osaka University, one of the leading universities in the world, established the Osaka University Global Alumni Fellow to promote international collaboration in education and research.

- Roswell Park's President & CEO and Wallace Family Chair in Translational Research, **Candace S. Johnson, PhD,** was honored by Trocaire College as one of the recipients of the college's 2015 Reflections Awards. Dr. Johnson was recognized for her significant contributions to the Western New York community and beyond, and for reflecting the values of the Sisters of Mercy and the mission of Trocaire.

- **Michael R. Kuettel, MD, PhD, MBA, FASTRO**, Professor and Chair of the Department of Radiation Medicine has been elected to the Board of Directors of the **American Society for Radiation Oncology (ASTRO)**. His four-year term as a member of the Board began with ASTRO's annual business meeting in October, which was held during ASTRO's 57th Annual Meeting.

- Graft-versus-host disease can be a dangerous side effect of blood or marrow transplant. It occurs when the donor's T cells attack the patient's normal cells. With a five-year, $2.01 million grant from the NCI, **Xuefang Cao, MD, PhD**, Associate Professor of Oncology, Department of Immunology, is leading research aimed at shutting down this side effect and increasing the desired effect of graft-versus-leukemia.

- RPCI has once again been named to **U.S. News & World Report's Best Hospitals – Cancer** list, and remains the only New York institution outside Manhattan to be included on this ranking of distinguished centers. The NCI-designated comprehensive cancer center, no. 43 among the top hospitals for cancer care in the country, was also ranked by U.S. News as **High Performing in Urology**. The recognition, in conjunction with the Institute's recent publication of outcomes data in the report Quality 2014, affirms the center's strong performance across many clinical areas and quality measures. Less than 3 % of the nearly 5,000 hospitals that were analyzed for Best Hospitals 2015-16 were nationally ranked in even one specialty. Among the factors on which Roswell Park was assessed highly: survival rate for patients treated at the Institute; intensity of nurse staffing; availability of advanced technologies such as Gamma Knife surgery and endoscopic ultrasound; and patient services, including pain management and palliative care.

- **Candace S. Johnson, PhD**, President & CEO and Wallace Family Chair in Translational Research, placed no. 2 in Buffalo Business First's Power 100 Women. The prestigious list highlights influential women who are forging ahead on their individual paths to make our region stronger for economic prosperity, business prominence and livability. Business First compiles the rankings based on years of observing the area's business community and determining the level of influence, impact and length of one's career, and the various efforts of women in the eight counties of Western New York.

- **Candace S. Johnson, PhD**, President & CEO and Wallace Family Chair in Translational Research, was elected to the Board of Directors of the **Association of American Cancer Institutes (AACI)**, effective at the national organization's annual meeting held in Washington, D.C. Dr. Johnson will

serve a three-year term along with two other newly appointed board members: Robert DiPaola, MD, Director of the Rutgers Cancer Institute of New Jersey; and Stephen Gruber, MD, PhD, MPH, Director of the University of Southern California (USC) Norris Comprehensive Cancer Center in Los Angeles.

- **Candace S. Johnson, PhD**, President & CEO and Wallace Family Chair in Translational Research at RPCI, was recognized as the 2015 honoree at the **American Cancer Society's (ACS) Cuisine for a Cure gala**, held on Saturday, Sept. 19, at Statler City. Dr. Johnson was honored for her leadership, excellence in the field of cancer research, and unwavering commitment to the quality of care in Western New York.

- RPCI was once again included on **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. In selecting facilities for its Great Oncology Programs feature, the Becker's editorial team analyzed data from U.S. News & World Report cancer rankings, CareChex rankings, BlueCross BlueShield Association Blue Distinction Center designations, NCI designations, Commission on Cancer accreditations and awards received and membership in the National Comprehensive Cancer Network (NCCN).

- RPCI received more than **$7.2 million in grant awards** for important research projects during the third quarter of 2015. Two faculty members were awarded more than $2 million each for their respective investigations into the origins of the disease and cancer cell genesis.

  **Katerina Gurova, MD, PhD**, Professor of Oncology in the Department of Cell Stress Biology, received two awards from the NCI that focus on tumor-initiating cells, or cancer stem cells. These types of tumor cells are to blame for cancer's seemingly endless ability to produce new tumor cells, resulting in relapse after treatment and in metastatic disease. One grant is a five-year, $2.01 million award to explore how curaxins, a novel class of anticancer agents, kill cancer stem cells while not harming normal stem cells.

  Dr. Gurova's other grant, a two-year, $419,884 award, funds research that seeks a better understanding of the role of FACT in development of cancer. Using genetic tools to turn FACT on and off, she and her colleagues hope to determine whether targeting FACT can also eradicate cancer without harming normal stem cells.

  Another multimillion-dollar grant was awarded to **Mikhail Nikiforov, PhD**, Professor of Oncology in the Department of Cell Stress Biology, who received a five-year, $2.02 million award from the NCI for his investigation into the role of a recently discovered transcriptional factor, Kruppel-like factor 9 (KLF9), in melanoma genesis. KLF9 is a protein that induces oxidative stress. This project will explore how it's involved in melanoma progression, and aims to identify new targets for treating metastatic melanoma, one of the most aggressive and poorly understood human cancers.

  Other Roswell Park researchers awarded grant funding during the third quarter of 2015 are:

  **John Krolewski, MD, PhD**, Professor of Oncology in the Center for Personalized Medicine and the Department of Cancer Genetics, who received a two-year, $667,992 award from the NCI to investigate the effects of androgen-deprivation therapy (ADT), a common approach for treating prostate cancer. In particular, this study will examine the role of molecules that mediate the

effect of ADT and act between cancer cells and the surrounding cells, known as the tumor microenvironment. Dr. Krolewski hopes that identifying the molecules involved can lead to the development of novel prostate cancer therapies.

**Dominic Smiraglia, PhD**, Associate Professor of Oncology in the Department of Cancer Genetics, received a three-year, $639,476 award from the U.S. Department of Defense for research that targets the methionine salvage pathway as a metabolic point of leverage, a potential Achilles heel for prostate cancer based on inherent and unique metabolic stress that can be exploited. Dr. Smiraglia and colleagues will test a novel therapeutic approach for increasing the metabolic stress in prostate cancer cells while concurrently blocking the mechanism that they use to relieve that stress. This work may lead to new treatment strategies to complement existing approaches.

**Deborah Erwin, PhD**, Director of the Office of Cancer Health Disparities Research, received a three-year, $354,262 supplemental grant from the NCI to expand NCI-Supported Community Outreach Capacity Through Community Health Educators of the National Outreach Network.

**Kunle Odunsi, MD, PhD, FRCOG, FACOG**, Cancer Center Deputy Director, Chair of the Department of Gynecologic Oncology and Executive Director of the Center for Immunotherapy at Roswell Park, received a three-year, $200,274 supplemental grant from the NCI that supports doctoral student **Adaobi Amodi's** research efforts supporting the Specialized Program of Research Excellence (SPORE) in Ovarian Cancer, a project to investigate immune-based approaches to treating ovarian cancer.

**Jianmin Zhang, PhD**, Assistant Professor of Oncology in the Department of Cancer Genetics, received a one-year, $195,441 supplemental grant from the NCI to support his work in establishing preclinical models that characterize cancer in African-Americans with breast cancer and will be used in predicting clinical outcomes, drug evaluation, biomarker identification, biologic studies and personalized-medicine strategies.

**Song Yao, PhD**, Associate Professor of Oncology in the Department of Cancer Control and Prevention, received a two-year, $175,000 award from the NCI. This project will involve exome array analysis to better understand genetic factors determining the onset of menarche and menopause in a large population of African-American women, which may help to elucidate their roles in relation to breast cancer occurrence.

**Lauren Burkard-Mandel**, a predoctoral trainee in the Department of Immunology, received a four-year, $138,448 fellowship award from the NCI for a study of a population of immune cells, known as macrophages, that adopt pro-metastatic functions. Her project explores a novel role of a cancer-derived substance known as thymic stromal lymphopoietin (TSLP) in the mechanisms that underlie such aberrant macrophage behavior. Identification of this "cancer-TSLP-macrophage axis" may offer new opportunities to treat patients with breast cancer.

**Beth Pflug, PhD**, Associate Professor of Oncology in the Department of Urology, received a one-year, $125,346 award from the U.S. Army Medical Research and Materiel Command (USAMRAA) within the Department of Defense to explore the mechanism by which benzodiazepines block an enzyme that's associated with prostate cancer aggressiveness and progression. Her project seeks to understand how benzodiazepines inhibit the fatty-acid synthase (FASN) pathway, inducing tumor cell death, and to develop an FASN inhibitor for therapeutic use.

**Michael Fiandalo, PhD**, a postdoctoral Research Affiliate in the Department of Urology, received a two-year, $123,642 award from USAMRAA to investigate a way to enhance existing androgen-deprivation therapy for men with advanced prostate cancer. He aims first to develop a high-throughput androgen-metabolism-inhibitor screen, and then to develop an inhibitor that works against four enzymes, to improve tumor regression and extend survival.

**James Mohler, MD**, Chair of the Department of Urology and Associate Director/Senior Vice President for Translational Research, received a one-year, $112,746 subcontract award from Cedars-Sinai Medical Center as part of a grant from the NCI to study whether intensive cholesterol-lowering intervention will reduce the levels of cholesterol and testosterone in the prostate and, secondarily, decrease the growth rate of prostate cancer. The work could lead to a large clinical trial of cholesterol-lowering drugs to decrease the chance that men who choose active surveillance for low-risk prostate cancer will ever need treatment.

**Rodney Haring, PhD, MSW**, Assistant Professor of Oncology in the Department of Cancer Prevention and Population Sciences, received a two-year grant of $78,306 from the Aetna Foundation. His project, founded on the first large-scale obesity intervention study in Native American youth, will seek to determine how best to translate and disseminate intervention initiatives across the country to populations at high risk for obesity, diabetes, cancer and other health disparities.

- RPCI has been named a **2015 Press Ganey Guardian of Excellence Award** winner in the area of Patient Experience. Guardian of Excellence awards recognize health care organizations that have consistently performed in the 95th percentile or above in a particular area of operations. Roswell Park's award was based on patient surveys regarding its inpatient care and on the **Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)** survey, and reflects sustained performance in the top 5% of all Press Ganey clients for each reporting period between May 2014 and April 2015. This was the first time the comprehensive cancer center was eligible for this award. The award was presented Nov. 11 during the Press Ganey National Client Conference in Orlando, Fla. Accepting the award was **Maureen Kelly, RN, MS**.

- Twenty-nine physicians from RPCI were included in the **Castle Connolly Medical, Ltd.** prestigious **America's Top Doctors®** list. The annual directory, offered by the healthcare research and information company, is designed to help guide consumers to America's leading doctors. Physicians are nominated by their peers in an extensive survey process of thousands of doctors in the United States. The doctors' educational and professional experience is then screened by a physician-led team of researchers before final selection is made.

  Roswell Park physicians cited by specialty are: **Nicoleta Voian, MD, MPH (**Clinical Genetics); **Ermelinda Bonaccio, MD** and **Alan Klitzke, MD, FACNM** (Diagnostic Radiology); **Shashikant Lele, MD, FACOG** and **Adekunle Odunsi, MD, PhD, FRCOG, FACOG** (Gynecologic Oncology); **Philip McCarthy, MD** (Hematology); **Brahm Segal, MD** (Infectious Disease); **Martin Mahoney, MD, PhD** (Internal Medicine); **Amy Early, MD, Francisco Hernandez-Ilizaliturri, MD, Ellis Levine, MD** and **Maureen Ross, MD, PhD** (Medical Oncology); **Robert Fenstermaker, MD** (Neurological Surgery); **Laszlo Mechtler, MD, FAAN** (Neurology); **Dominick Lamonica, MD** (Nuclear Medicine); **Wesley Hicks, Jr., MD, FACS** (Otolaryngology); **Oscar DeLeon, MD** (Pain Medicine); **Richard Cheney, MD** (Pathology); **Michael Kuettel, MD, PhD, MBA, Dheerendra Prasad, MD, MCh, FACRO** and **Anurag Singh, MD** (Radiation Oncology); **Steven Hochwald, MD, FACS,**

**John Kane, MD, FACS** and **Boris Kuvshinoff, MD, MBA** (Surgery); **Chukwumere Nwogu, MD, PhD, FACS** and **Anthony Picone, MD, PhD, MBA** (Thoracic & Cardiac Surgery); and **Khurshid Guru, MD, Eric Kauffman, MD** and **James Mohler, MD** (Urology).

- Investigators at RPCI have garnered nearly **$7 million** in research grants during the fourth quarter. The awards include a five-year, $2.4 million grant from the NCI to optimize a particular approach for administering photodynamic therapy (PDT), a form of cancer therapy that was developed at Roswell Park in the 1970s.

  **Gal Shafirstein, DSc**, Professor of Oncology, Director of Photodynamic Therapy Clinical Research and a member of the Department of Cell Stress Biology, will lead that effort to improve interstitial photodynamic therapy (I-PDT) in patients with head and neck cancers that have started to spread to other tissues. PDT involves administration of a light-sensitizing drug that collects in cancer cells followed by illumination with a non-burning laser to kill cancer cells. This project will employ RPCI's novel treatment planning capabilities and integrated image-guided dosimetry system to define — for the first time — the optimal laser settings for treating patients with I-PDT.

  Other Roswell Park researchers who were awarded grant funding in late 2015 are:

  **Gary Smith, PhD**, Professor of Oncology, and **Yue Wu, PhD**, Assistant Professor of Oncology, both from the Department of Urology, received a five-year, $2 million award from the NCI for research to define the mechanisms that regulate how androgens move through blood vessel walls into prostate cancer cells, where they drive cancer growth. It's anticipated that the team's findings will identify androgen-uptake mechanisms that can be targeted to achieve a prostate-limited androgen-deprivation therapy for prostate cancer, minimizing the systemic side effects of conventional androgen deprivation.

  **Fumito Ito, MD, PhD**, Assistant Professor of Oncology in the Department of Surgical Oncology and the Center for Immunotherapy, received a five-year, $832,594 award from the NCI for his work with adoptive T-cell therapy, which uses a patient's own tumor-specific immune cells to fight cancer. Although the therapy has emerged as one of the most effective treatments for melanoma, lymphoma and leukemia, it's difficult to generate the large numbers of young T cells needed. Dr. Ito's preclinical study will test the safety and efficacy of rejuvenated tumor-specific T cells derived from induced pluripotent stem cells (iPSCs), adult cells reprogrammed into embryonic-like cells.

  **James Mohler, MD**, Associate Director and Senior Vice President for Translational Research and Chair of the Department of Urology, received a two-year, $450,000 award from the New York State Department of Health to award internally to research projects that represent an innovative approach to an important problem in prostate cancer. The internal grantees and their projects are:

  > **Gary Smith, PhD**, Professor of Oncology, in the Department of Urology, for the project "ADT-induced therapeutic window for treatment of organ-localized prostate cancer."

**Anna Woloszynska-Read, PhD**, Assistant Professor of Oncology in the Department of Pharmacology and Therapeutics, for the project "Genetic and epigenetic prostate cancer-related alterations in early-onset disease in African American men."

**Yue Wu, PhD**, Assistant Professor of Oncology in the Department of Urology, for the project "Targeting usage of adrenal androgens for complete androgen deprivation therapy."

**Mikhail Nikiforov, PhD**, Professor of Oncology in the Department of Cell Stress Biology, received a two-year, $410,314 award from the NCI to examine the regulation of tumor-suppressor genes in the course of melanoma progression.

**Santosh Patnaik, MD, PhD**, Assistant Professor of Oncology in the Department of Thoracic Surgery, received a three-year, $371,583 subcontract award from the University at Buffalo, part of a larger project funded by the NCI. That grant will fund a project titled "Noninvasive detection of circulating RNA for lung cancer early detection and prognosis."

**Wen Wee Ma, MBBS**, Associate Professor of Oncology in the Department of Medicine, shares leadership of a five-year NCI grant that involves a consortium of research institutions in Northern Ireland, the Republic of Ireland and the United States. RPCI was awarded a subcontract grant of $235,610 from the University at Buffalo, the lead institution for the U.S. in this project. The four collaborating sites are researching combination chemotherapy approaches for pancreatic cancer that pair nanoparticle drug-delivery carriers with "tumor priming" drugs that enhance the ability of nanoparticles to deposit in tumors.

**Peter Demant, MD, PhD**, Distinguished Member, Department of Molecular and Cellular Biology, received a two-year, $171,500 award from the NCI for work to explore genetic markers that may predict whether a tumor will respond to certain chemotherapy drugs. His findings could potentially pave the way for patients to avoid ineffective drugs in their treatment.

**Paul Wallace, PhD**, Professor of Oncology and Director of the Department of Flow & Image Cytometry, received a five-year, $131,264 award from the National Marrow Donor Program for the project "Minimal residual disease testing via multiparametric flow cytometry."

- The **DAISY Award** is an international program that rewards and celebrates the extraordinary clinical skill and compassionate care given by nurses every day. Roswell Park Cancer Institute is proud to be a DAISY Award Partner, recognizing one inpatient and one ambulatory nurse with this special honor every quarter. This year, **Daisy Award** winners include: **Sara Schneller, RN, AAS**, Nurse II, 6 East; **Ashley Keppel, AS, RN, BSN**, Nurse II, 6 East**; Heather Sabadasz, AAS, RN, BSN**, Clinical Research Nurse, 7 North; **Kelly Stawicki, RN, AAS**, Case Management; **Laura Cornwall**, RN, AAS, Nurse II, Amherst Center; as well as Kevin Mickle, RN, and Barbara Krull, BSN, RN, both formerly of RPCI.

***Clinical & Scientific Achievements***

- In an effort to better align the operational structure of the century-old cancer center, Roswell Park Cancer Institute's 15th and first female president, **Candace S. Johnson, PhD**, President &

CEO and Wallace Family Chair in Translational Research, began her tenure by reorganizing the talent around her. New appointments to and within the RPCI staff were made:

**Kunle Odunsi, MD, PhD, FRCOG, FACOG,** was named Deputy Director of the Institute. Dr. Odunsi provides operational oversight for the scientific, clinical-research and educational missions of RPCI, and monitors all research-related initiatives, steering development of programs and policies designed to transfer scientific discoveries to clinical settings.

**Boris Kuvshinoff II, MD, MBA,** was named Chief Medical Officer. A longtime clinical faculty leader and surgical oncologist at RPCI since 2002, Dr. Kuvshinoff directs and manages the organization's medical-affairs strategy, including operational areas such as clinical practice, risk management, physician recruitment and credentialing. He also manages the Institute's quality strategy, an ongoing initiative to improve the overall quality of the organization's facilities and patient-care services.

**Victor Filadora, MD, MBA,** was named Chief of Clinical Services. In this new role, Dr. Filadora, an anesthesiologist first appointed to RPCI's medical staff in 2003, manages the Ambulatory Services, Perioperative Services, Sterile Processing, Pharmacy, Patient and Family Experience, Endoscopy Services and Therapeutic Services programs, and will also provide leadership and guidance to clinical department administrators throughout the Institute.

**Thomas Schwaab, MD, PhD,** was named Chief of Strategy, Business Development and Outreach. Dr. Schwaab, an Associate Professor of Oncology and Immunology, joined the Institute's faculty in 2009. In this new role, Dr. Schwaab will supervise RPCI's business development and overall strategic development. He will assure that business and clinical initiatives are delivered appropriately and support maximal quality, efficiency and effectiveness, and will work to continually widen the Institute's scope of operations and growth potential at national and international levels.

**Everett Weiss, MD,** recently joined the Institute as Chief Medical Information Officer. A board-certified pediatrician with a certificate in biomedical informatics, Dr. Weiss comes to Roswell Park from Allscripts Healthcare Inc. in Chicago, Ill. Representing the interests of all clinical providers, he will promote and optimize RPCI's use of electronic health-record systems and other clinical information technology to improve the quality, safety, reliability and efficiency of clinical workflows in the care of patients. He will also oversee viable clinical-informatics and data-governance functions and committees that support improved clinical outcomes and translational and epidemiological research.

**Errol Douglas, SPHR,** recently joined Roswell Park as Vice President of Human Resources. Douglas comes to RPCI from the University of Miami Health System, Miami, Fla., where he was the Executive Director of Human Resources for the hospitals within the health care system. At Roswell Park, Douglas will direct all human-resources responsibilities, formulating personnel policies and procedures to support the Institute's mission and ensuring consistency with laws, rules, regulations and contractual obligations.

**Terrie Kothe** was named Vice President of Managed Care. Kothe, who joined RPCI in 2012, negotiates and manages relationships between RPCI and third-party healthcare payers,

including commercial and government plans. Additionally, she develops and executes strategic business plans to promote revenue growth, quality improvement and financial performance.

**Pamela Germain, MBA,** was named Vice President for Strategic Initiatives. Germain joined the administrative staff of the Institute in 1998, and in this new role manages the relationships between Roswell Park's Center for Personalized Medicine and reimbursement-planning team with managed-care, commercial and government payers. She will head the effort to collaborate and negotiate with payers for services associated with OmniSeq Target, an advanced diagnostic test developed at RPCI that detects specific cancer-related gene mutations and guides targeted-therapy decisions.

**Mary Reid, MSPH, PhD,** was named Director of Cancer Screening and Survivorship. Dr. Reid came to RPCI in 2002 and is currently a Professor of Oncology in the Department of Medicine. In this new role, Dr. Reid will expand her work on Roswell Park's pioneering Lung Cancer Screening Program and develop other cancer screening initiatives within the Institute, working with clinical departments to expand the colon and breast screening programs. Dr. Reid will also develop a comprehensive survivorship clinical and outreach program. In addition, Dr. Reid has been appointed as Associate Dean for Graduate Curriculum in the Division of Education.

**David Goodrich, PhD,** was named Interim Chair of the Department of Pharmacology and Therapeutics. Dr. Goodrich joined Roswell Park in 2001. He has previously served as Chair of the Molecular Pharmacology and Cancer Therapeutics graduate programs within the Roswell Park Graduate Division of the University at Buffalo. Dr. Goodrich will be responsible for supporting the scientific research of departmental faculty and providing leadership in developing research in high-priority fields.

**Julia Faller, DO, MS,** was named Medical Director of Perioperative Services. Dr. Faller joined Roswell Park in 2009 as a staff physician in the Department of Anesthesiology and Pain Medicine. In this new role, she will provide day-to-day leadership and management of the operations of Roswell Park's operating rooms, Endoscopy Suite, Post-Anesthesia Care Units and Surgery Center.

**James Mohler, MD,** was named Associate Director of Cancer Center Support Grant (CCSG) Shared Resources. Dr. Mohler is a national leader in clinical care and research in urologic oncology. He joined Roswell Park in 2003 and is also Chair of the NCCN Prostate Cancer Guidelines Committee. In addition to his current role as Senior Vice President of Translational Research, Dr. Mohler takes on responsibility for overseeing the shared resources funded by CCSG. These resources, which include 14 laboratories, centers and/or facilities (such as the Bioinformatics Shared Resource, Clinical Data Network and Data Bank and BioRepository), serve the common needs of cancer researchers. Providing state-of-the-art science tools through these cores allows cancer research to be conducted more efficiently and with higher quality so that RPCI researchers can better compete for the limited federal funding and better serve the needs of the region.

- RPCI-led research showed a twofold increase in the prevalence of human endogenous retroviruses (HERVs) K113 and K115 in African-American women compared to European American women. These HERVs are present in the human genome and may offer certain

protection against breast cancer. **Li Tang, PhD**, Associate Professor of Oncology at Roswell Park, is the first author and **Christine Ambrosone, PhD**, Senior Vice President, Population Sciences and Chair of the Department of Cancer Prevention and Control at Roswell Park, is the senior author of "Associations between insertional polymorphisms of human endogenous retrovirus K113 and K115 and breast cancer risk in African-American and European women," which was presented at the American Association for Cancer Research (AACR) Annual Meeting 2015.

- In the largest study of its kind to date, RPCI-led research found a potential biological mechanism of cancer in a multiethnic cohort of breast cancer survivors. **Song Yao, PhD**, Associate Professor of Oncology in the Department of Cancer Prevention and Control at Roswell Park, is the first author and Marilyn Kwan, PhD, Research Scientist II in the Division of Research at Kaiser Permanente Northern California, is the senior author of "Genetic variations associated with breast cancer-related lymphedema in a prospective multiethnic cohort," which was presented at the AACR Annual Meeting 2015.

- A first-of-its kind cancer vaccine, **SurVaxM**, has demonstrated safety and tolerability in patients with recurrent or progressive malignant brain tumors, according to results of a phase I study conducted by RPCI researchers. The findings were presented at the AACR Annual Meeting 2015. The study title is "Phase I study of SurVaxM in patients with survivin-expressing recurrent malignant gliomas." This immunotherapeutic vaccine will now be evaluated in a larger phase II clinical trial to assess its effectiveness for patients with advanced brain tumors and a new phase I clinical trial for multiple myeloma patients. SurVaxM was developed by **Robert Fenstermaker, MD**, Chair of the Department of Neurosurgery and **Michael Ciesielski, PhD**, Assistant Professor of Oncology, Department of Neurosurgery.

- RPCI researchers have identified common inherited gene alterations that appear to make some patients more at risk of neurotoxicity when treated for breast cancer. The research was presented at the AACR Annual Meeting 2015. **Christine Ambrosone, PhD**, Senior Vice President of Population Sciences and Chair of the Department of Cancer Prevention and Control at RPCI, is the senior author of "A genome-wide association study identifies novel loci associated with taxane-related sensory neuropathy in breast cancer patients enrolled in a cooperative group clinical trial."

- RPCI researchers examined the characteristics of genetic variants in human toll-like receptor 5 (TLR5), and have found that these genetic variants may predict antitumor responses to entolimod, an immunotherapeutic agent with antitumor activity. TLR5 plays a critical role in early immune response and is expressed in a wide variety of tumors and in normal tissues at common sites of metastases (eg, liver, lung). The results were presented at the AACR Annual Meeting 2015. **Andrzej Wierzbicki, PhD**, a postdoctoral fellow at Roswell Park, along with **Araba Adjei, PhD**, former Associate Professor of Oncology in the Department of Pharmacology and Therapeutics at RPCI, and colleagues, conducted the study "Functional characterization of human toll-like receptor 5 (TLR5) genetic variants" (abstract 5492). **Alex Adjei, MD, PhD**, former Senior Vice President for Clinical Research at RPCI, also is a co-author of this study.

- RPCI researchers have made new findings about the causes and impacts of RNA modification or "editing." Innate immune cells — the body's first line of defense — possess the ability to extensively change genetic information by means of RNA modification as a response to factors

associated with inflammation. Further, aberrations in this process may predispose humans and other mammals to viral infections, cancer or other chronic diseases, according to the study, which was published in *Nature Communications*. A team led by **Bora Baysal, MD, PhD**, Associate Professor in the Department of Pathology & Laboratory Medicine, in collaboration with the research group of **Santosh Patnaik, MD, PhD**, Assistant Professor in the Department of Thoracic Surgery, determined that inflammatory factors such as hypoxia, or a low-oxygen environment, and interferons, cellular proteins that signal the presence of a pathogen, cause innate immune cells to change their gene transcript sequences in a process mediated by an enzyme, APOBEC3A.

- The latest research from the team that discovered the novel anticancer agent FL118 highlights distinctive characteristics of this small-molecule compound and provides insights into its ability to overcome the persistent problem of treatment resistance. In findings reported in *Molecular Cancer*, **Fengzhi Li, PhD**, Associate Professor of Oncology in the Department of Pharmacology and Therapeutics, and colleagues provide new evidence that FL118 may be more effective than two structurally similar injectable drugs and, additionally, may be effective as an oral agent. The study, entitled "FL118, a novel camptothecin derivative, is insensitive to ABCG2 expression and shows improved efficacy in comparison with irinotecan in colon and lung cancer models with ABCG2-induced resistance," is available at molecular-cancer.com.

- Long-term and frequent use of aspirin is associated with significantly decreased risk of cervical cancer, according to a study led by researchers at RPCI and published in the *Journal of Lower Genital Tract Disease*. Aspirin use was associated with a 47% reduced risk of cervical cancer among frequent users — those who used aspirin seven or more times a week, regardless of duration — and 41% reduced risk among long-term frequent users — those with five or more years of frequent use. Acetaminophen use was not associated with decreased risk of cervical cancer. A research team led by **Kirsten Moysich, PhD**, Professor of Oncology in the Department of Cancer Prevention and Control at Roswell Park, reported the results from the first U.S.-based study to examine the association between regular use of aspirin or acetaminophen.

- The review of pathology reports for breast cancer can have a significant impact on patient care. In a study authored by **Thaer Khoury, MD**, Professor of Oncology in the Department of Pathology at RPCI, and **Yousef Soofi, MD**, formerly of RPCI, and published in *The Breast Journal*, the Roswell Park pathology team shared results on the review of 500 breast core biopsy cases provided by referring institutions in a single calendar year. In 20% of cases examined, a pathological diagnosis change was made. A pathological diagnosis is the foundation upon which all other treatment decisions are made for patients diagnosed with breast cancer. The cases in the study were defined as reflecting a *minor discordance* when the change in diagnosis did not impact the patient and a *major discordance* when patient care was impacted through a change in therapy modality. Dr. Khoury and colleagues found that 8% of the cases had a major discordance and 13% had a minor discordance. The change of diagnosis from benign to malignant or vice versa, while less common, was identified in 1% of the cases examined.

- Scientists looking to better understand the mechanisms behind the origin and spread of melanoma tumors have uncovered a possible role for a decades-old antibacterial agent in treating these aggressive and increasingly common cancers. In findings reported in the journal *Cell Death and Differentiation*, the researchers demonstrate that a particular enzyme, guanosine monophosphate synthase (GMPS), drives melanoma growth, and propose a new pharmaceutical

strategy for targeting that protein. Researchers led by **Mikhail Nikiforov, PhD**, Professor of Oncology, investigated the role of GMPS, a key enzyme in guanylate metabolism, in melanoma development and metastasis. The authors evaluated the effects of GMPS depletion and explored the possibility of targeting GMPS by angustmycin A, also known as decoyinine. While this compound was discovered in the early 1950s as a potential antibiotic, it has never been experimentally investigated as an antitumor agent nor investigated at all in clinical settings. Dr. Nikiforov and colleagues demonstrate in this latest study that GMPS levels are increased in human metastatic melanoma specimens and that pharmaceutical inhibition of GMPS by angustmycin A has the potential to be effective as a targeted anti-melanoma therapy for tumors carrying either of the two most common mutations: BRAFV600E and NRASQ61R.

- RPCI opened a new specialty pharmacy dedicated to the prescription needs of cancer patients. The pharmacy, located on the first floor of the main hospital, is designed to be a one-stop location providing patients with their oncology-related and supportive medications. Patients will now be able to fill their prescriptions on-site at the time of their appointments or they may choose to have the medications delivered directly to their home (within a 150-mile radius of the Institute). The pharmacy can fill prescriptions for supportive medications prescribed by Roswell Park physicians, as well as provide over-the-counter medications. The Roswell Park Pharmacy is staffed by board-certified oncology pharmacists who are members of the patient's multidisciplinary care team. As such, the Roswell Park pharmacists provide information about oral chemotherapy medications; follow-up consultations; therapeutic drug monitoring; drug interactions checks; comprehensive medication reconciliation; and safety checks. These oncology experts also help patients understand their prescription coverage benefits.

- A collaborative team of researchers led by **Alex A. Adjei, MD, PhD, FACP**, formerly of RPCI shared results from the first clinical study of the anticancer effects of the novel agent entolimod at the ASCO's 51st Annual Meeting in Chicago. Their findings confirm preclinical evidence that the agent, which is derived from salmonella flagellin, is worthy of further investigation as treatment for some of the most common and most resilient solid-tumor cancers. Toll-like receptors are a family of proteins that help generate immune responses against cancer and other pathogens. Entolimod, the lead drug candidate of **Cleveland BioLabs Inc.**, of Buffalo, N.Y., activates toll-like receptor 5 (TLR5) and has been shown to have immunotherapeutic effects in preclinical cancer models. **Hatoon Bakhribah, MD**, a Drug Development Fellow in RPCI's Department of Medicine, presented results of this phase I clinical study at ASCO. Dr. Adjei and colleagues evaluated the agent's safety, tolerability, pharmacokinetics, immunoactivity and preliminary antitumor activity in patients with a number of different advanced cancers, including colorectal, non-small-cell lung, anal and urothelial bladder tumors.

- RPCI researchers have developed an accurate, individualized post-operative survival calculator and integrated the technology into a mobile application compatible with smartphone technology for oncologists and patients diagnosed with colon cancer. Information about the calculator was presented at the ASCO 51st Annual Meeting in Chicago. The study's first author, **Emmanuel Gabriel, MD**, a Fellow in the Department of Surgical Oncology at RPCI, and colleagues used the National Cancer Database to analyze 16 patient-specific demographics, tumor and treatment-related variables and their impact on survival among 230,520 colon cancer patients who received treatment from 2004 to 2006. Senior author on the study is **Steven Nurkin, MD**, Assistant Professor of Oncology in the Department of Surgical Oncology at RPCI.

- The incidence of melanoma, a deadly form of skin cancer, has increased by more than 250% among children, adolescents and young adults since 1973, according to award-winning research to be presented by RPCI at the ASCO 51st Annual Meeting in Chicago. The research has been recognized with an **ASCO Merit Award**. Analyzing SEER data, RPCI scientists determined that the number of cases of melanoma diagnosed in children, adolescents and young adults increased by 253% from 1973 to 2011. Survival rates also have increased — from 80% for the period 1973-1980 to 95% in 2011. Female young adults appear to be at particular risk for melanoma, a trend that may be due to known risk factors such as high-risk tanning behaviors. **Demytra Mitsis, MD**, is lead author of the study and a Fellow in the Department of Medical Oncology at Roswell Park.

- While squamous cell anal carcinomas are rare, representing only about 2% of digestive-system cancer diagnoses, these cancers, which are associated with the human papillomavirus (HPV), sometimes prove very difficult to treat, recurring or developing metastases following standard treatment. Seeking to identify new targets and therapeutic options for this disease, a multi-institutional team led by **Patrick Boland, MD**, Assistant Professor of Oncology at RPCI conducted a multiplatform biomarker analysis in conjunction with Caris Life Sciences that revealed several actionable targets. The study was presented at the ASCO 51st Annual Meeting in Chicago.

- A large cooperative-group study directed by the **Alliance for Clinical Trials in Oncology** has confirmed previous evidence that the drug lenalidomide delays time to disease progression for patients with multiple myeloma and is an important treatment option for patients with this rare but increasingly common cancer of the blood and marrow. Updated results of the ongoing study, which is led by **Philip McCarthy, MD**, and **Sarah Holstein, MD, PhD**, of RPCI, was highlighted during a poster discussion session at the ASCO 51st Annual Meeting in Chicago.

- A study led by the **University at Buffalo (UB)** and RPCI has identified beliefs and personality traits that are associated with higher levels of distress in newly diagnosed prostate cancer patients. The findings support the value of emotional and informational support for patients and perhaps early counseling for some who are the most distressed. Factors that were associated with greater distress included a lack of confidence in deciding how to treat the cancer; being concerned that the cancer will progress; feeling that one's masculinity was under threat; and tendencies to be less optimistic and resilient. The study, "Factors Associated with Emotional Distress in Newly Diagnosed Prostate Cancer Patients," was first published online in *Psycho-Oncology* in January 2015. The results are from a larger longitudinal study of prostate cancer patients, "Live Well Live Long!" The research was based on assessments of 1,425 men newly diagnosed with prostate cancer at five different centers. Heather Orom, PhD, is the study's lead author and an assistant professor of community health and health behavior in UB's School of Public Health and Health Professions. **Willie Underwood III, MD, MPH**, an Associate Professor of Oncology in the Department of Urology at Roswell Park, served as principal investigator on the study. A second set of analyses from the same study revealed that emotional distress may motivate men diagnosed with prostate cancer to choose surgery.

- Blood and Marrow Transplantation (BMT) is a potentially curative treatment for patients with leukemia or other life-threating blood diseases. With a goal of increasing survival rates, a research team led by RPCI investigators verified patient outcome data submitted by more than 150 U.S. transplant centers over an 11-year period to the **Center for International Blood and Marrow Transplant Research (CIBMTR)**. The detailed investigation — published in the journal *Biology of Blood and Marrow Transplantation* — offers insight into different causes of death.

The results of this genome-wide association study led to the development of a first-of-its-kind definition of specific causes of mortality after unrelated-donor, or allogeneic, BMT. **Theresa Hahn, PhD**, of the Department of Medicine and Lara Sucheston-Campbell, PhD, formerly of the Department of Cancer Prevention and Population Sciences, are co-principal investigators of this study, which is supported by a **NIH** award for $5.18 million, the largest R01 research grant in Roswell Park's history.

- More than 150 news organizations from around the country have published stories about the award-winning research conducted by Roswell Park scientists and recently presented at the ASCO's annual meeting. **Demytra Mitsis, MD**, a Hematology-Oncology Fellow, and **Nikhil I. Khushalani, MD,** formerly of RPCI, co-authors of the study, found that the incidence of melanoma, a deadly form of skin cancer, has increased by more than 250% among children, adolescents and young adults over a period of four decades.

- **OmniSeq, LLC** an RPCI spin-off company and began commercializing its suite of innovative products that support a physician-driven, collaborative approach to genomic diagnostics — matching cancer patients to therapies tailored specifically to them. Collectively known as **OmniSeq℠ Precision Medical Technology**, OmniSeq provides oncology groups, hospitals, and healthcare systems with the first-ever fusion of clinical genomics and a comprehensive information technology solution that provides easy access to actionable insights about their patient's condition and available treatment options. Like Roswell Park, OmniSeq is based in Buffalo, NY.

- Early age at menarche, or first menstrual cycle, could play a role in the disproportionate incidence of estrogen receptor (ER)-negative breast cancers diagnosed among African-American women, according to a study published in the *Journal of the National Cancer Institute*. The study is a result of a multicenter collaborative research effort that formed the **African American Breast Cancer Epidemiology and Risk Consortium (AMBER)**, which includes **Christine Ambrosone, PhD**, Senior Vice President of Population Sciences and Chair of the Department of Cancer Prevention and Control at RPCI, Andrew Olshan, PhD, Professor and Associate Director for Population Sciences at the University of North Carolina Lineberger Comprehensive Cancer Center, and Julie Palmer, ScD, Professor of Epidemiology at the Slone Epidemiology Center at Boston University. AMBER researchers investigated the epidemiologic and genetic causes for more aggressive breast cancer in African-American women. They combined four epidemiologic studies with large numbers of African-American participants: **The Black Women's Health Study (BWHS)**, the **Multiethnic Cohort Study (MEC)**, the **Carolina Breast Cancer Study (CBCS)**, and the **Women's Circle of Health Study (WCHS)**. The researchers conclude that age at menarche may be critical even in the development of ER-negative breast cancer, regardless of having children, and that the origins of ER-negative vs. ER-positive breast cancer at the cellular and molecular level may be different.

- A major unsolved mystery in immunity relates to the mechanisms underlying the protective action of fever. A review of the current understanding of how fever impacts the immune system is offered by researchers from RPCI and published in the recent journal of *Nature Reviews Immunology*. New insights regarding the benefit of the heat component of a natural fever response are being exploited by the research programs of **Sharon Evans, PhD**, and **Elizabeth Repasky, PhD**, both Professors of Oncology in the Department of Immunology, to boost the efficacy of cancer immunotherapy.

- In the largest multi-institutional study to date, patients diagnosed with bladder cancer and treated with robot-assisted surgery (ROS) experienced similar results to those who underwent a traditional open operation, according to research led by scientists at RPCI. The study results were recently published in the journal of the *European Association of Urology*. **Khurshid Guru, MD**, Director of Robotic Surgery in the Department of Urology at RPCI, reported that research results found that robot-assisted radical cystectomy provides similar early oncological outcomes while reducing operative blood loss. This research continues to document the viability of this type of minimally invasive surgery, according to **James Mohler, MD**, Associate Director and Senior Vice President for Translational Research at Roswell Park.

- Ovarian cancer patients and survivors may benefit from exercise during and after treatment while under the care of their physician, according to results of a comprehensive literature review published online in *Gynecologic Oncology*. **Kirsten Moysich, PhD**, Professor of Oncology, and **Rikki Cannioto, EdD**, Research Associate, both in the Department of Cancer Prevention and Control at RPCI, investigated the relationship between physical activity and risk factors for ovarian cancer. Twenty-six peer-reviewed research studies were included in the analysis. The majority of case-control studies demonstrated evidence of a protective effect of exercise relative to ovarian cancer risk with significant reductions of 30% to 60% among the most active women. However, cohort studies showed mixed results.

- Some of the most exciting recent advances in cancer treatment have involved adoptive T-cell therapy, in which a patient's immune cells are retrained to recognize and attack tumor cells. New findings reported by RPCI researchers in the journal *Nature Communications* help explain why these approaches have been so effective, revealing a critical role for a particular signaling protein and opening up several possible strategies for improving these emerging cancer therapies. Visualizing blood vessels in real time, the researchers, led by **Sharon Evans, PhD**, Professor of Oncology, observed that the chemokine receptor CXCR3 must be present on the T cells, or T lymphocytes, in order for these important cancer-fighting cells to be delivered to tumors. The scientists, who included collaborators from the **University of Rochester Medical Center/Wilmot Cancer Center**, the **University of Chicago and Massachusetts General Hospital/Harvard Medical School**, were surprised to find that CXCR3 molecules serve the same function in both human melanoma cells and in preclinical models of melanoma, and that other, similar chemokine receptors do not possess this ability. These results suggest that the mechanisms governing T-cell homing are more complex than previously realized, and that T cells may respond differently to trafficking cues depending on the disease setting.

- Cigarette smokers appear to be influenced by electronic cigarette advertising, according to a study published online in the journal *Tobacco Induced Diseases*. **Danielle Smith, MPH**, Senior Research Associate and **Andrew Hyland, PhD**, Chair, both of the Department of Health Behavior at RPCI, conducted a pilot study to examine whether or not exposure to ads for e-cigarettes influenced interest in trying e-cigarettes among a sample of 600 smokers and non-smokers from 18 – 65 years of age.

- Tobacco cessation provided significant survival benefit for lung cancer patients who quit smoking shortly before or after diagnosis, despite the severity of the disease. Results of the RPCI study were published in the *Journal of Thoracic Oncology*. RPCI has a unique **Tobacco Assessment and Cessation Service (TACS)** that conducts a standardized tobacco use assessment for lung cancer patients treated in the Thoracic Center, and automatically refers patients who

smoke to a dedicated tobacco cessation counseling service. Using data from TACS, 250 patients participated in the study. Those who had recently stopped smoking (50 patients), or quit after their first contact with TACS (71 patients) had reduced mortality rates compared to patients who continued to use tobacco. The median survival for patients who reported they had stopped smoking was 28 months compared with 18 months for those who continued to use tobacco. The survival advantage for those who stopped smoking was adjusted for demographics, disease stage and other health characteristics. Study results also suggested that there may be a survival benefit even if a patient has not completely quit tobacco use, but continues to attempt to quit after a cancer diagnosis. Mortality rates for those who relapsed were similar to current users. **Mary Reid, MSPH, PhD**, Director of Cancer Screening and Survivorship at Roswell Park, is senior author on the study.

- It has long been known that rates of breast and cervical cancer screening among Latinas are low compared to rates for U.S. women overall. A study led by researchers at RPCI found that age and fear of cancer diagnosis are among the reasons why Latina women do not continue participation following breast and cervical cancer education programs. The research was published in the *Journal of Health Communication: International Perspectives.* This research is a secondary analysis of a large randomized, controlled study reported earlier and was designed to specifically understand the characteristics of women who were lost to attrition for follow-up telephone calls following participation in the multisite, peer-led education program ***Esperanza y Vida*** **(EyV)**. **Deborah Erwin, PhD**, is Principal Investigator of the study and Director of the Office of Cancer Health Disparities Research at Roswell Park.

- **Argos Therapeutics Inc.**, an immuno-oncology company focused on the development and commercialization of immunotherapies for the treatment of cancer based on the Arcelis technology platform, announced the initiation of a single-center pilot clinical trial of AGS-003 as a neoadjuvant immunotherapy, or treatment to shrink a tumor before surgery, in patients with localized renal-cell carcinoma. The study is being conducted at RPCI, and is designed to enroll a maximum of 10 patients who will be treated with AGS-003 before nephrectomy in order to assess immune-system response and tumor effects. **Thomas Schwaab, MD, PhD**, Chief of Strategy, Business Development & Outreach, Associate Professor of Oncology, in the departments of urology and immunology and urology clinic director at RPCI is principal investigator for the AGS-003 pilot study. Argos is evaluating AGS-003 in the phase III ADAPT trial in combination with standard targeted therapy for the treatment of metastatic renal cell carcinoma. The ADAPT trial is fully enrolled; interim data analyses are expected next year, with final data expected in the first part of 2017. Dr. Schwaab is a member of Argos' inaugural Scientific Advisory Board and receives compensation from Argos for this service.

- The **Department of Pathology and Laboratory Medicine** opened its new **Frozen Section/Cytology Fast Stain Suite** in August 2015. This area services the urgent needs of the operating room and endoscopy areas. Having these labs in proximity to the Surgical Suites and the Endoscopy Center—where tissue specimens are obtained—streamlines communication between medical and surgical teams, enhances procedures and improves diagnosis. The new suites also include new technology that allows the pathologist to project an image of what he or she sees under the microscopic onto any PC on the RPCI network. This allows the pathologist to conference remotely with other pathologists and/or with the surgeon or endoscopist in real time. This results in decreased procedure time and also decreases the number of biopsies needed to obtain a diagnosis. In addition to improving the continuum of care for RPCI's patients,

the suite enhances the Institute's educational mission by allowing trainees, including fellows, residents and medical students to view diagnostic material in real time as the patient is undergoing a procedure giving immediate feedback to correlate the clinical impression with the pathology findings.

- One patient's journey undergoing three Blood and Marrow Transplants while struggling with myelofibrosis, a bone marrow disease that can lead to acute leukemia, has provided new insights into mechanisms that may reduce some negative transplant side effects. The case study was published as a Letter to the Editor in *Bone Marrow Transplantation*, an online journal which is part of Nature Publishing Group. The key finding of this report highlights the ability of the normal donor blood and marrow cells to eliminate the malignant cells while leaving the patient's normal cells alone, not causing the negative side effect of Graft-versus-Host Disease (GvHD). This is the first case describing a prolonged remission with JAK2 negativity whose transplant initially did not take after BMT. **Philip McCarthy, MD** is the senior author of the article and Director, Blood and Marrow Transplant Center, Department of Medicine. He is collaborating with his colleague, **Xuefang Cao, MD, PhD**, Associate Professor of Oncology in the Department of Immunology.

- A paradox of cancer therapy is that sometimes treatment can make the disease worse. **John Ebos, PhD**, Assistant Professor of Oncology, Departments of Cancer Genetics and Medicine at RPCI has published a review in the journal *Cancer Research* that explains this phenomenon in preclinical studies and details examples of when treatment helped cancer metastases spread and grow. Understanding these mechanisms may hold clues as to why the benefits of certain cancer treatments in humans are often more limited than preclinical models predict. A broader exploration of this phenomenon may help explain treatment failure and provide clues on how to improve patient treatment outcomes.

- **Christine Ambrosone, PhD**, Senior Vice President of Population Sciences and Chair, Cancer Prevention & Control, and **Chi-Chen Hong, PhD**, Associate Professor of Oncology, are featured authors invited to offer 'state of the science' analysis along with their perspectives on the advances and future directions in breast cancer research in the book, Improving Outcomes for Breast Cancer Survivors. This new publication was edited by Patricia Ganz, MD, Jonsson Comprehensive Cancer Center, UCLA, and published by the **Breast Cancer Research Foundation.** Nearly three million U.S. breast cancer survivors must adjust to a new normal. The publication focuses on patient-centered outcomes of breast cancer, highlighting specific patient populations, their unique needs and experiences, as well as issues such as quality of life and psychosocial concerns. Dr. Ganz noted that the contributing authors' research reveals the depth and breadth of scientific research on breast cancer outcomes.

- New officers for the **American Society of Regional Anesthesia and Pain Medicine (ASRA)** began their terms at the 40th Annual Regional Anesthesiology and Pain Medicine Meeting, and the President of the prestigious organization is Roswell Park's **Oscar DeLeon, MD**, Chief of the Division of Pain Medicine and Professor of Oncology. ASRA is the largest subspecialty medical society in anesthesiology. Its mission and vision address the clinical and professional educational needs of physicians and scientists, ensuring excellence in patient care, utilizing regional anesthesia and pain medicine, and investigating the scientific basis of the specialty.

- A history of oral contraceptive use and having at least one child increased longevity by nearly three years in patients diagnosed with ovarian cancer, according to a RPCI study published online ahead of print in the *International Journal of Gynecological Cancer*. **Kirsten Moysich, PhD**, is senior author of the study and Professor of Oncology in the Department of Cancer Prevention and Control at Roswell Park. A history of oral contraceptive use was associated with a 35-month improvement in survival (81 versus 46 months) in 387 women diagnosed with ovarian cancer between January 1982 and December 1998 at RPCI. This association was even more pronounced when adjusted for age at diagnosis, stage of disease and ovarian cancer subtype. Additionally, patients who reported a single live birth lived more than four and a half years longer than those who never gave birth. However, the survival advantage was not significantly different between those who did and did not take oral contraceptive pills.

- An innovative vaccine therapy developed at RPCI is being tested in a multisite clinical trial involving 50 patients with newly diagnosed glioblastoma brain tumors. The phase II study, now accruing patients at both Roswell Park and the **Cleveland Clinic**, will assess the effectiveness of the **SurVaxM** vaccine in combination with standard chemotherapy as treatment for this often-fatal cancer. Though relatively rare, glioblastoma is the most common and aggressive type of primary brain tumor. The SurVaxM vaccine, developed by Roswell Park faculty members **Robert Fenstermaker, MD**, and **Michael Ciesielski, PhD**, targets survivin, a cell-survival protein that's present in the vast majority of cancers, including glioblastoma. A peptide mimic, the vaccine is engineered to treat survivin-expressing cancer cells as foreigners, inciting a specific immune response. Preclinical studies suggest that the approach may be worthy of additional study in melanoma, ovarian and prostate tumors and perhaps in other survivin-expressing cancers.

- In an article for the *American Medical Association Journal of Ethics*, **J. Brian Szender, MD**, Fellow in Gynecologic Oncology, and **Shashikant Lele, MD, FACOG**, Clinical Chief, Department of Gynecologic Oncology, reviewed the state of the science regarding the surgical removal of the fallopian tubes as an option to reduce the risk of ovarian cancer. The fallopian tubes have been proposed as one of the places where ovarian cancer develops. More and more medical experts are recommending removal of the fallopian tubes after childbearing among women undergoing other surgeries as a way to reduce the risk of ovarian cancer. The fallopian tubes may be the origin of up to half of ovarian cancers, and removing the fallopian tubes when women have completed childbearing may reduce the rate of ovarian cancer in the population by 20-40 percent. However, as the general population of women is at low risk for developing ovarian cancer, fallopian tubes would only be removed from willing patients who are undergoing surgery for other reasons.

- Significant differences in attitudes toward smoking cessation are reported between two generations of smokers in Northern Appalachia (which includes 14 New York state counties) in new research from RPCI. The qualitative study about beliefs, attitudes and experiences of current and former smokers in Northern Appalachian communities, published online ahead of print in the *Journal of Community Health*, contributes novel information about smoking cessation. **Martin Mahoney, MD, PhD**, is senior author of the research and Professor of Oncology in the Department of Medicine at RPCI. **Elisa Rodriguez, PhD**, is lead author of the study and Assistant Professor of Oncology in the Office of Cancer Health Disparities Research and the Center For Personalized Medicine at RPCI.

- Three-quarters of women treated for ovarian cancer face relapse of their disease. And while those who respond well to initial therapy do tend to survive longer, they require additional treatment for recurring cancer just as frequently as other women whose initial treatment response was not so pronounced. This is a key conclusion of new research from RPCI, published online ahead of print in the journal *Gynecologic Oncology*, which contributes new information about the dynamics of recurrent ovarian cancer. This study analyzed two time frames: the time from the start of chemotherapy to when the disease reoccurs and the time from the end of one chemotherapy regimen to the commencement of the next. **Kevin Eng, PhD**, is lead author of the study and Assistant Professor of Oncology in the Department of Biostatistics and Bioinformatics at Roswell Park. **J. Brian Szender, MD, MS**, is senior author and a fellow in Gynecologic Oncology at RPCI.

- **Martin Morgan, PhD**, joined RPCI as an Associate Member of the Department of Biostatistics and Bioinformatics. He remains Director of the **R/Bioconductor Project**, an open-source, open-development software system created to provide tools for high-throughput analysis and comprehension of genomic data — a resource now based at Roswell Park. Dr. Morgan joins Roswell Park and the University at Buffalo's School of Public Health and Health Professions, where he will serve as Research Professor in the Department of Biostatistics, from the Fred Hutchinson Cancer Research Center in Seattle, where he was Principal Scientist within the Division of Public Health Sciences. He's been involved with R/Bioconductor since 2005 and has led the project since 2008.

- In separate studies presented at the **European Cancer Congress (ECCO 2015)**, which was held in conjunction with the annual meeting of the **European Society for Medical Oncology (ESMO 2015)**, researchers from RPCI reported promising findings about a pair of breakthrough drugs in cancers that have in the past proven to be notoriously difficult to treat.

  **Saby George, MD, FACP,** Associate Professor of Oncology, was co-author on the landmark CheckMate 025 phase III study (abstract 3LBA) comparing the effectiveness of the anti-PD-1 targeted immunotherapy drug nivolumab (brand name Opdivo) with standard chemotherapy (everolimus, brand name Afinitor) in advanced kidney cancer, and presenting author on a related study of nivolumab in patients treated beyond the progression of their disease. The findings from the phase III study, which was stopped early because evidence showed a clear benefit of treatment with nivolumab, were published simultaneously in the *New England Journal of Medicine*. The U.S. Food and Drug Administration (FDA) recently granted Breakthrough Therapy status to nivolumab based on these striking findings, which mark the first time an agent has demonstrated, as a primary endpoint, an overall survival benefit compared to standard of care in second-line metastatic renal cell carcinoma.

  **Wen Wee Ma, MBBS**, presented new findings on MM-398, a nanoliposomal irinotecan (also known as nal-IRI), in collaboration with NAPOLI-1 investigators and Merrimack Pharmaceuticals, led by Dr. Bambang Adiwijaya as the clinical pharmacologist. Dr. Ma also presented the results of a phase Ib study of dovitinib plus standard chemotherapy (gemcitabine and capecitabine) in patients with advanced pancreatic cancer, concluding that this combination merits further study.

- The key to immune-based cancer therapies lies in the ability to exploit some weakness within the tumor and its environment or to elude cancer's offenses. Writing in the journal *Scientific Reports*, researchers led by a group from the **RPCI Center for Immunotherapy** have shared new insights about a subset of T cells that appear to do both those things, inhibiting cancer growth at the same time that they enhance the tumor-killing powers of other immune cells. The researchers identified a subset of CD4+ "helper" T cells that they call "tumor-recognizing CD4+ T cells" or TR-CD4 because of their unique ability to recognize and respond to cancer cells. These special CD4+ T cells are antigen-specific: they recognize the tumor antigen NY-ESO-1, which is expressed by many solid tumors, including ovarian, melanoma, prostate, lung, breast and synovial sarcoma cancers. **Kunle Odunsi, MD, PhD**, Cancer Center Deputy Director, Executive Director of Roswell Park's Center for Immunotherapy is senior author on the new study.

- **Kara Kelly, MD** was appointed as the new leader of the joint program in pediatric hematology/oncology, a partnership of Women & Children's Hospital of Buffalo (WCHOB), RPCI, UBMD Pediatrics and the University at Buffalo (UB). WCHOB, RPCI and UB have provided pediatric hematology and cancer care through a comprehensive and collaborative program for more than 40 years.

  Dr. Kelly came to RPCI from the Columbia University College of Physicians and Surgeons. Her appointments as Chair of Pediatric Oncology, Professor of Oncology and the Waldemar J. Kaminski Endowed Chair of Pediatrics at RPCI and Medical Director of the Pediatric Hematology/Oncology Service Line at WCHOB, a Kaleida Health facility, took effect on February 15, 2016. Dr. Kelly also assumed the responsibilities of Division Chief of Hematology and Oncology at both UBMD Pediatrics and the Department of Pediatrics in the Jacobs School of Medicine and Biomedical Sciences at the University at Buffalo, where she was appointed research professor.

  Kelly is recognized nationally and internationally as an expert in the treatment of pediatric lymphoma and leukemia and serves as the chairperson of the Hodgkin lymphoma committee of the Children's Oncology Group. Kelly brings a wealth of knowledge in clinical trials and integrative medicine to the Western New York community, with a keen interest on how nutrition and diet may help children being treated for acute lymphoblastic leukemia (ALL) better tolerate their therapy. Her focus on helping patients and their families cope with cancer therapy led her to co-author Integrative Strategies for Cancer Patients: A Practical Resource for Managing the Side Effects of Cancer Therapy (Hackensack: World Scientific Publishing, 2012).

- There has been great progress in recent decades in the treatment of pediatric cancers, with high cure rates possible today for several childhood malignancies. Prognosis remains poor, however, for children diagnosed with a number of pediatric cancers, and many existing therapies are associated with long-term side effects that impact survivors' life expectancy and/or quality of life. Writing in the journal *Science Translational Medicine*, an international team of scientists from the **Children's Cancer Institute–Australia**(CCIA), **RPCI** and **Incuron LLC** report significant progress toward addressing these persistent challenges. The CCIA's Daniel Carter, PhD**,** Glenn Marshall, MD, and co-authors report that they have identified a new treatment approach for a highly aggressive and usually fatal subtype of neuroblastoma, a cancer of nerve cells that is one of the most frequent solid tumors in children. The researchers provide evidence that the protein complex FACT (facilitates chromatin transcription) represents a new and promising biomarker candidate and a target for treatment of this aggressive, treatment-resistant disease. They

observe that a FACT-targeting drug candidate — CBL0137, which was developed by the biotech company Incuron, in collaboration with scientists from RPCI — has demonstrated significant antitumor activity in preclinical models of neuroblastoma. CBL0137 is a small molecule that belongs to a class of agents called curaxins, which were invented by a group that included paper co-author **Andrei Gudkov, PhD, DSci**, Senior Vice President for Basic Science at Roswell Park and founder and Chief Scientific Officer of Incuron.

- A majority of youths who report having used tobacco say their first experience using tobacco involved a flavored product. That's the key finding of new research based on the first large U.S. study to survey users about a wide variety of tobacco products, and its implications for public health and health policy are significant, say the study's authors. Writing in *JAMA,* the Journal of the American Medical Association, Bridget K. Ambrose, PhD, MPH, of the Center for Tobacco Products, U.S. Food and Drug Administration, and colleagues outline their analysis of flavored tobacco use as reported by U.S. youth participating in the **Population Assessment of Tobacco and Health (PATH) Study**, a study of 45,971 U.S. adults and youth. **Andrew Hyland, PhD**, Scientific Principal Investigator of the PATH Study and a co-author on the new study, notes that most of the young tobacco users responding to the survey also reported that they were currently using flavored tobacco products.

- Two studies from *JAMA*, the Journal of the American Medical Association, report that fewer men are being screened for prostate cancer. These findings are concerning, says **James Mohler, MD**, Chair of the Department of Urology at Roswell Park and also Chair of the NCCN's Prostate Cancer Guidelines Committee, particularly since they also noted a pronounced decrease in the numbers of men being diagnosed with early-stage prostate cancers. Dr. Mohler advised that PSA testing should be personalized and used more frequently in men who are African American, who have brothers or fathers who have been diagnosed with prostate cancer, or who have BRAC mutations or Agent Orange exposure.

- RPCI transfuses more than 17,000 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.

- Large studies have shown improved survival for patients with esophageal cancer who receive both chemotherapy and radiation ahead of surgery to remove their tumors. However, looking to isolate the driving factors behind these favorable responses, a group of surgeons and biostatisticians from RPCI found that this approach was much more effective in patients whose esophageal cancer had spread to the lymph nodes. This suggests the possibility that this treatment option might not be the best choice for patients with no evidence of lymphatic spread, according to the study, which was published in *JAMA Surgery*. The researchers, led by **Moshim Kukar, MD**, Assistant Professor of Oncology, and **Emmanuel Gabriel, MD, PhD**, Clinical Fellow, of the Department of Surgical Oncology at Roswell Park, conducted a retrospective analysis using American College of Surgeons National Cancer Data Base records from 1998 to 2006. They looked primarily at overall survival three years after diagnosis of esophageal cancer. As secondary outcomes, they also looked at surgical margin status, postoperative length of stay, unplanned readmission rate and mortality within 30 days of surgery. The researchers plan to use the study results in a survival calculator they are developing

that they hope will predict outcomes for individual patients with esophageal cancer, based on unique factors and circumstances.

- Acute kidney injury (AKI), also known as acute renal failure, is one of the main contributors to death and disability worldwide, yet no preventive treatment for the condition has been established. In a new study published in the journal *Cell Death and Differentiation*, a team of researchers led by scientists from RPCI reports that they have identified 10 genes whose inhibition appears to protect kidney cells. The findings point the way to strategies for preventing AKI, perhaps through treatment with existing, well-tolerated drugs, and may also help to evade drug resistance in cancer therapy. The research team, led by **Eugene Kandel, PhD**, Assistant Professor of Oncology in the Department of Cell Stress Biology at Roswell Park, used high-throughput functional-genomics technology to uncover 10 genes, interference with which protects kidney epithelial cells in ischemia-like conditions. Further experiments have shown that chemical inhibition of the product of one of the genes — TACR1 — reduces the extent of ischemic AKI in laboratory models. The team also found that some of these same genes are involved in how cells respond to not only ischemia but other damaging stresses as well, including those triggered by anti-cancer therapy.

- The size of a surgically removed tumor is generally thought to relate to the risk of the cancer spreading to other regions of the body. But because tumor cells may metastasize at different times and the rate of spread is difficult to assess, the relationship between tumor size and the relative risk of recurrence after surgery is challenging to calculate. Writing in the journal *Cancer Research*, scientists at RPCI and Inria, the French National Institute for computer science and applied mathematics in Bordeaux, France, demonstrate that mathematical models can provide useful clues about the impact of surgery on metastasis and may help to predict the risk of cancer spread. The mathematical modeling confirmed a strong dependence between presurgical primary tumor size and postsurgical metastatic growth and survival. The study's senior author is **John Ebos, PhD**, Assistant Professor of Oncology in the departments of Cancer Genetics and Medicine at RPCI.

- In the five decades since camptothecin was first isolated from the bark of a tree used in traditional Chinese medicine and identified as a powerful anticancer agent, several thousand chemicals with similar structures and functions have been investigated. And while two of these analog compounds, irinotecan and topotecan, have been approved in the U.S. as treatments for cancer, both are associated with significant shortcomings. Researchers from RPCI have reported findings about a new synthetic form of camptothecin, known as FL118, that appears to have greater potency, longer efficacy and fewer adverse side effects than irinotecan and topotecan. Writing in the *American Journal of Translational Research,* a team led by **Fengzhi Li, PhD**, Associate Professor of Oncology, of the Roswell Park Department of Pharmacology and Therapeutics has documented the findings of their latest preclinical study of FL118, which was shown to effectively eliminate human colon and head-and-neck xenograft tumors that were developed to be resistant to both irinotecan and topotecan.

- More than a dozen RPCI researchers were invited to present findings at the **American Society of Hematology (ASH)** 57th Annual Meeting & Exposition, a four-day meeting in Orlando, Fla. Among them were four teams invited to deliver podium presentations detailing what they learned from their latest research projects. **Lara Sucheston-Campbell, PhD**, formerly of RPCI,

gave an oral presentation on a genome-wide association study (GWAS) conducted to determine whether outcomes for patients receiving blood and marrow transplant (BMT) could be improved by identifying genetic factors in both transplant recipients and their unrelated donors. This GWAS, named the DISCOVeRY-BMT (Determining the Influence of Susceptibility Conveying Variants Related to One-Year Mortality after BMT) project, is the largest study of its kind and the first GWAS of survival following BMT from an unrelated donor. This effort was supported by the largest Research Project (R01) grant ever awarded to RPCI researchers by the **NIH** and one of its member agencies, the **National Heart, Lung, and Blood Institute**.

A podium presentation by **Theresa Hahn, PhD**, detailed additional findings from the same DISCOVeRY-BMT GWAS. Dr. Hahn and colleagues examined genotype profiles for thousands of BMT recipients and their unrelated donors. Dr. Hahn is a Professor of Oncology in the Department of Medicine.

**Kyle Runckel,** a predoctoral trainee in the Department of Immunology, gave an oral presentation from Roswell Park at the ASH 2015 meeting, reporting findings from a study in diffuse large B-cell lymphoma (DLBCL), the most common form of non-Hodgkin lymphoma. The addition of rituximab as a frontline treatment for this disease, in combination with other agents, has significantly improved outcomes for patients with relapsed/refractory DLBCL, but drug resistance remains an issue for many patients.

**Adam Utley**, a Predoctoral Trainee in the Department of Immunology, was a presenter from RPCI at the ASH 2015 meeting. His presentation was titled, “CD28 Induces Mitochondrial Respiration through Slp-76 in Long-Lived Plasma Cells for Reactive Oxygen Species-Dependant Survival.” CD28 is a key molecule that facilitates survival of multiple myeloma and antibody-producing plasma cells in bone marrow by inducing metabolic fitness.

Additional Roswell Park presentations from the meeting are listed below:

Presented by **Alyssa Aldridge**, a former undergraduate student in the lab of **Sarah Holstein, MD, PhD**: “Effects of Novel Tropolones with Selective HDAC Inhibitor Activity in Myeloma Cells.” This summer research project was supported by funding from the NCI of the NIH.

Presented by **Bora Baysal, MD, PhD**, Associate Professor of Medicine in the Department of Pathology and Laboratory Medicine: “Oxygen Sensing By Succinate Dehydrogenase Regulates Transcriptional Response to Hypoxia in Monocytes.”

Presented by **Maria Bhatti, MD**, Clinical Fellow in the Department of Pediatrics: “PI3K/Akt/mTOR Pathway Inhibition in Chemotherapy-Sensitive and -Resistant Models of Burkitt Lymphoma.”

Presented by **Alyssa Clay**, former Predoctoral Trainee in the Department of Cancer Prevention and Control: “Evidence for Heterogeneous Genetic Associations with Acute Lymphoblastic Leukemia (ALL) By Cytogenetics and Sex in High-Risk Patients Treated with Matched Unrelated Donor Allogeneic Blood or Marrow Transplant (URD-BMT).”

Presented by **Jason Den Haese, PhD**, Research Technologist in the Department of Medicine: “Functional Genomics and Computational Approaches Identify Novel Small Molecules Targeting

Quiescent Leukemia Stem Cells."

Presented by **Christopher Dougher**, Predoctoral Trainee in the Department of Immunology: "Palbociclib (PD-0332991), a Potent Selective CDK4/6 Inhibitor, Overcomes Therapy-Resistant and Sensitizes Diffuse Large B-Cell Lymphoma Pre-Clinical Models to Chemo-Reagents."

Presented by **Elizabeth Griffiths, MD**, Associate Professor of Oncology in the Department of Medicine: "Induction of Cancer Testis Antigen Expression in Circulating Acute Myeloid Leukemia Blasts Following Hypomethylating Agent Monotherapy" and "NY-ESO-1 Vaccination in Combination with Decitabine for Patients with MDS Induces CD4+ and CD8+ T-Cell Responses."

Presented by **Juan Gu, PhD**, Postdoctoral Associate in the Department of Medicine: "Metformin Induces p53-Dependent Mitochondrial Stress in Therapy-Sensitive and -Resistant Lymphoma Pre-Clinical Model and Primary Patients Sample with B-Cell Non-Hodgkin Lymphoma (NHL)," "Palbociclib (PD-0332991), a Potent Selective CDK4/6 Inhibitor, Overcomes Therapy-Resistant and Sensitizes Diffuse Large B-Cell Lymphoma Pre-Clinical Models to Chemo-Reagents," and "JQ1, a Potent c-MYC Inhibitor Overcomes Rituximab-Chemotherapy Resistance in Lymphoma Pre-Clinical Models"

Presented by **Monica Reddy Muppidi, MD**, Clinical Fellow in the Department of Medicine: "CLAG±M (cladribine, cytarabine, granulocyte colony stimulating factor ± mitoxantrone) Results in High Response Rates in Older Patients with Secondary and Relapsed/Refractory Acute Myeloid Leukemia - a Single Institute Experience."

Presented by **Jayakymar Nair, PhD**, formerly a scientist with the Department of Immunology: "Abstract 4184, JQ1, a Potent c-MYC Inhibitor Overcomes Rituximab-Chemotherapy Resistance in Lymphoma Pre-Clinical Models."

Presented by **Kyle Runckel**, Predoctoral Trainee in the Department of Immunology: "Targeting the X-Linked Inhibitor of Apoptosis Protein (XIAP) Can Promote Tumor Cell Death, and Increase the Cytotoxic Effects of Chemotherapy Agents in In Vitro and In Vivo Models of Rituximab-Resistant Lymphoma."

Presented by **Pallawi Torka, MD**, Clinical Fellow in the Department of Medicine: "Augmenting Neutrophil Function By Administration of Peg-Filgrastim Potentiates Rituximab and Is Safe in Patients with Indolent B-Cell Non-Hodgkin Lymphomas: Results of a Phase II Study," and "Effect of Immune Reconstitution on Survival after Autologous Hematopoietic Cell Transplant for B-Cell Non-Hodgkin Lymphoma."

Presented by **Eunice Wang, MD**, Chief, Leukemia Service, and Professor of Oncology in the Department of Medicine: "Plasma Vincristine Levels Are 100-Fold Higher with Marqibo®(Vincristine Sulfate LIPOSOME Injection) in Place of Standard Vincristine in Combination Chemotherapy of Patients ≥ 60 Years Old with Newly Diagnosed Acute Lymphoblastic Leukemia (ALL)," and "Phase 1 Study of CB-839, a First-in-Class, Orally Administered Small Molecule Inhibitor of Glutaminase in Patients with Relapsed/Refractory Leukemia."

Presented by **Qunling Zhang, MD, PhD**, formerly a visiting physician at Roswell Park: "Phase 1 Study of CB-839, a First-in-Class, Orally Administered Small Molecule Inhibitor of Glutaminase in Patients with Relapsed/Refractory Leukemia."

- When lobular carcinoma is detected by mammography, guidelines regarding other radiological features of the lesion help determine next steps: surgery to remove the lesion versus observation. However, MRI-detected lobular neoplasia, occurs far less commonly and the rate of upgrade to breast cancer is unknown due to the rarity of this scenario. Lead author on the study is **Thaer Khoury, MD, FCAP**, Professor in the Department of Pathology and Laboratory Medicine at RPCI. Dr. Khoury and RPCI's **Prasanna Kumar, MD**, Assistant Professor in the Department of Diagnostic Radiology, were able to collect a large number of cases thanks to collaborative work with other institutions including University of Pittsburgh Medical Center, Washington University, and Montefiore Medical Center.

- RPCI scientists report a novel enzyme inhibitor, Pevonedistat, demonstrated effectiveness in the laboratory against Mantle Cell Lymphoma (MCL), a rare and aggressive subtype of non-Hodgkin Lymphoma. The study was published in a recent issue of the journal *Blood*, a medical journal of the American Society of Hematology. Lead researcher on the study is **Francisco Hernandez-Ilizaliturri, MD**, Clinical Chief for Lymphoma and Myeloma at Roswell Park.

- Researchers in the Department of Pharmacology and Therapeutics at RPCI offer greater clarity of how a novel class of cancer-targeting agents called BET (Bromodomain and Extra-Terminal) inhibitors stimulate cell death in laboratory models of human cancers, specifically B-cell lymphomas. These findings were reported in a recent issue of issue of Cell Death and Disease. Senior author of the research is **Leigh Ellis, PhD**, Assistant Professor of Oncology. Dr. Ellis and the team of Roswell Park scientists also provided new insights into how BET inhibitors are capable of killing cancer cells and demonstrated their promise as a potential anti-cancer therapy option for patients with treatment-resistant B-cell lymphoma.

- A research team from the Department of Pharmacology and Therapeutics at RPCI has discovered a new class of small-molecule compounds that are good candidates for development of novel targeted therapies in the treatment of leukemia and lymphoma. This new class of compounds drives cancer cells to suicide, the researchers report in the peer-reviewed journal *Cell Death and Disease*. The study's senior author is **Xinjiang Wang, PhD**, Assistant Professor of Oncology.

- An analysis of 145 different electronic-cigarette flavoring products reveals that many e-cigarette users may be exposed to a potentially harmful chemical. In a research letter published online in the peer-reviewed journal *Thorax*, a research team led by **Maciej Goniewicz, PhD, PharmD**, reports that high levels of the respiratory irritant benzaldehyde were detected in the vapor from most of the flavored nicotine products they studied, with the highest concentrations in vapor from cherry-flavored products. The authors, who include researchers from the **Institute of Occupational Medicine and Environmental Health** and the **Medical University of Silesia**, both in Poland, measured benzaldehyde levels for 145 different flavored nicotine products using an automatic smoking simulator and calculated daily exposure to users from 163 e-cigarette puffs. Their analysis detected benzaldehyde in the vapor from 108 (74%) of the flavored products studied, and found concentrations of the chemical that were 43 times higher in cherry-flavored products than in other flavors. Dr. Goniewicz, the paper's senior author and Assistant Professor

of Oncology in Roswell Park's Department of Health Behavior, notes that this research was focused on a single toxicant and should be interpreted as a first step in understanding the potential health effects from flavored e-cigarettes.

- Successful recruitment and retention efforts, new collaborations with regional partners and setting the stage for new clinical and scientific initiatives all marked the first 12 months that **Candace S. Johnson, PhD** served as President and CEO of RPCI.

  In the year since Dr. Johnson was appointed, outpatient visits were up 6 percent, overall operating revenues were up 7 percent, revenues from clinical activity were up 13 percent, and the numbers of new patients turning to the Institute for the first time were up 21 percent.

  **Recruitment & Retention**
  It was also a year of change and strategic repositioning, with 18 outstanding recruits joining Roswell Park from other employers and 16 existing Roswell Park team members being promoted to new roles:

  **Marc Ernstoff, MD**, Senior Vice President for Clinical Investigation & Chair of the Department of Medicine. Dr. Ernstoff joins Roswell Park from the Cleveland Clinic, where he served as Director of the Melanoma Program at the Taussig Cancer Institute.

  **Kara Kelly, MD**, Chair of the Department of Pediatric Oncology, Professor of Oncology and the Waldemar J. Kaminski Endowed Chair of Pediatrics. Dr. Kelly, who was recruited from the Columbia University College of Physicians and Surgeons/Columbia University Medical Center, will head the joint pediatric hematology-oncology program operated collaboratively at Roswell Park, the John R. Oshei Children's Hospital, the University at Buffalo (UB) and UBMD Pediatrics.

  **Sai Yendamuri, MD, FACS**, Chair of the Department of Thoracic Surgery. Dr. Yendamuri, who returns to RPCI from a leave of absence spent overseas, is also a Professor of Oncology, an Attending Surgeon and Director of the Thoracic Surgery Laboratory at Roswell Park.

  **Dean Tang, PhD**, Chair of the Department of Pharmacology & Therapeutics. Dr. Tang, whose recent research has focused on prostate cancer, joins RPCI from the University of Texas MD Anderson Cancer Center.

  **Amy Case, MD**, Clinical Chief of the Department of Supportive & Palliative Care. Dr. Case was most recently a faculty member in the Department of Medicine at the Jacobs School of Medicine and Biomedical Sciences at UB.

  **Clare Twist, MD**, named to the new position of Director of Pediatric Experimental Therapeutics, coming to RPCI from Stanford University School of Medicine

  **Gurkamal Chatta, MD**, Clinical Chief for Genitourinary Medicine, has joined Roswell Park from the Cancer Institute at Virginia Mason Medical Center in Seattle.

  **Srinevas Reddy, MD**, Director of the Liver and Pancreas Tumor Center, has come to us from Virginia Piper Cancer Institute in Minneapolis

**Kazuaki Takabe, MD, PhD**, Clinical Chief of the Breast Program, joining RPCI from the Massey Cancer Center at Virginia Commonwealth University

**Robert Bies, PhD**, Director of the Pharmacokinetics/Pharmacodynamics Program, joining Roswell Park from Indiana University

**Fumito Ito, MD, PhD**, Staff Physician and Assistant Professor of Oncology in the Department of Surgical Oncology and the Center for Immunotherapy. Dr. Ito came to Roswell Park from the University of Michigan Health System.

**Michael Bax, MD**, a Mohs surgeon appointed to the Department of Dermatology, joins us after completing a fellowship at the University of Michigan.

**Stephen Edge, MD, FACS,** who will serve as Vice President for Healthcare Outcomes and Policy, returns to Roswell Park from Baptist Cancer Center in Memphis, Tenn.

**Anthony Fernando, PhD, MBA, RPh**, has joined Roswell Park as Executive Director of Pharmacy Services. Dr. Fernando was most recently with the Rochester Regional Health System.

**Matthew Buas, PhD**, who will serve as an Assistant Professor in the Department of Cancer Prevention and Control, joins Roswell Park from Fred Hutchinson Cancer Research Center in Seattle.

**Jan Nowak, MD, PhD**, most recently on staff at NorthShore University Health System in Evanston, Ill., joined Roswell Park as Clinical Chief of Molecular Pathology and Chief Medical Officer of OmniSeq LLC.

**David Donovan**, Executive Director of Corporate and Collaborative Initiatives, joins RPCI from Independent Health Association Inc.

**Errol Douglas, SPHR, SHRM-SCP**, previously on staff at the University of Miami, was named Vice President of Human Resources Management.

Among the 16 existing Roswell Park faculty/staff members promoted to new positions, four were appointed in senior leadership roles:

**Victor Filadora, MD, MS, MBA**, who was named Chief of Clinical Services, and **Boris Kuvshinoff II, MD, MBA**, who was promoted to Chief Medical Officer, have been charged with creating a clinical care operation that provides a five-star patient experience and an increase in operational efficiencies.

**Kunle Odunsi, MD, PhD, FRCOG, FACOG**, a longtime faculty member and founding Executive Director of Roswell Park's Center for Immunotherapy, is responsible for enhancing the research and development function in all Roswell Park science programs in his new role as the Institute's Deputy Director.

In his new role as Chief of Strategy, Business Development and Outreach, **Thomas Schwaab, MD, PhD**, a busy clinician and surgeon who continues to care for patients with kidney cancer, is forging new pathways so that Roswell Park services and expertise are available beyond the Institute's main campus.

Dr. Johnson's strategic administrative repositioning also saw nine clinical staff members named to new leadership roles as academic chairs or clinical chiefs of their programs:

**John Kane III, MD, FACS**, was promoted to Chair of the Department of Surgical Oncology

**Francisco Hernandez-Ilizaliturri, MD**, was promoted to Clinical Chief of Lymphoma

**Eunice Wang, MD**, was promoted to Clinical Chief of Leukemia

**Brahm Segal, MD**, was promoted to the new position of Chief of Faculty Leadership

**Mary Reid, PhD, MSPH**, was promoted to the new position of Director of Cancer Screening & Survivorship

**Christine Ambrosone, PhD**, was promoted to Senior Vice President of Cancer Prevention and Control

**Charles LeVea, MD, PhD**, was promoted to Vice Chair of the Department of Pathology & Laboratory Medicine

**Sebastiano Battaglia, PhD**, was promoted to Assistant Professor of Oncology in the Center for Immunotherapy and the Department of Cancer Genetics

**Ermelinda Bonaccio, MD**, was promoted to Clinical Chief of Breast Imaging

Also promoted to new roles within Roswell Park were:

**David Tear, MBA**, who joined RPCI in 2014, to the new position of Executive Director of Ambulatory Services, a role in which he will spearhead an ambitious redesign of Roswell Park's ambulatory care program

**Laura Krolczyk**, who joined the Institute's staff in 2010, to the new position of Director of State Relations

**Dale Henry**, who joined Roswell Park in 2011, to the new position of Chief Scientific Operations Officer

- **Marc S. Ernstoff, MD**, was appointed Professor and Chief of the Division of Hematology/Oncology in the Department of Medicine in the Jacobs School of Medicine and Biomedical Sciences at the University at Buffalo (UB), and Chair of the Department of Medicine and Senior Vice President of Clinical Investigation at RPCI. Ernstoff also will serve as chief of the Division of Hematology/Oncology at UBMD Internal Medicine, the clinical practice plan of the

UB Department of Medicine. The appointments took effect on April 1. In 2014, Ernstoff became the Director of the Melanoma Program at Cleveland Clinic's Taussig Cancer Institute. From 1991 to 2014, he served as Associate Professor of Medicine and Professor of Medicine at Dartmouth College's Geisel School of Medicine and Dartmouth-Hitchcock Medical Center. During much of his tenure, Ernstoff was the director of the Melanoma Program at the Norris Cotton Cancer Center and the Section Chief of Hematology/Oncology. Ernstoff was previously a faculty member at the University of Pittsburgh's School of Medicine, where he directed the Hematology/Oncology fellowship training program; he also was an Assistant Professor of Medicine at Yale University and Director of its Clinical Research Office. Ernstoff's clinical research is focused on the treatment of melanoma and genitourinary cancers. A member of the National Comprehensive Cancer Network Melanoma Committee, he is also a member of the International Melanoma Working Group.

- For nearly a decade, RPCI has collaborated with **Cleveland BioLabs Inc.** (CBLI), a Buffalo-based company, to support the development of a drug that has applications as both a cancer immunotherapy and a radiation countermeasure. They recently published the latest findings from these combined efforts in the journal *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*. This preclinical research, by a team of scientists led by **Andrei Gudkov, PhD, DSc,** Chief Scientific Officer of CBLI and Senior Vice President of Basic Science at Roswell Park, provides new insight on how CBLI's most advanced drug candidate, entolimod (also known as CBLB502), works with an organism's immune system. They report that entolimod, which belongs to the class of agents called toll-like receptor 5 agonists, suppresses cancer metastasis and induces immune activity by simulating a cascade of cell-signaling events involving three different types of immune cells.

- A team of RPCI researchers has developed and evaluated the first intravital microscopy system shown to be safe for use in humans. Writing in the journal *Nature Communications*, the scientists report that their proprietary technology enabled them, for the first time ever, to visualize tumor blood vessels in real time. In a small study involving patients with melanoma tumors, the researchers show that this approach to viewing malignancies in real time during surgery is not only feasible, but that it revealed unexpected findings about the vasculature of human tumors, with potentially significant implications regarding the delivery of cancer treatments such as chemotherapy and immunotherapy. A team led by **Joseph Skitzki, MD, FACS,** Chair of the Melanoma/Sarcoma Disease Site Research Group at Roswell Park, designed and constructed a mobile platform for performing IVM in humans in the operating room. While most surgical microscopes allow for 15X magnification, their IVM platform enables magnification of 100X or higher. In their newly published feasibility study, the investigators report their findings from IVM observation of the tumors of 10 patients with melanoma.

- Ovarian cancer, one of the deadliest malignancies, is actually a constellation of different cancers that may originate in other organs and should not be treated as a single disease, concludes a new congressionally mandated report on the state of ovarian cancer incidence, treatment and research. The report, published by the **Institute of Medicine (IOM)** of the **National Academies of Sciences, Engineering, and Medicine**, also highlights persistent serious disparities in delivery of care across different groups of women in the U.S., and suggests promising areas for further research. **Kunle Odunsi, MD, PhD, FRCOG, FACOG**, Deputy Director and Chair of Gynecologic Oncology at RPCI is co-author on the study. The report notes that the five-year survival of

women with the most common and fatal type of ovarian cancer, high-grade serous carcinoma, has increased from 36 percent to nearly 46 percent over the past four decades as a result of advances in specialty care and the development of effective first-line chemotherapy.

- Seven RPCI teams were invited to present their research at the 69th annual **Cancer Symposium of the Society of Surgical Oncology (SSO)**, March 2–5 in Boston, Mass:

  **Emmanuel Gabriel, MD**, Clinical Fellow, and faculty member **Moshim Kukar, MD**, Assistant Professor of Oncology, both of the RPCI Department of Surgical Oncology developed two novel calculators for esophageal cancer patients that identify who will derive a survival benefit from neoadjuvant chemoradiation and predict individualized three-year overall survival from multimodality therapy. The model included patients from the National Cancer Data Base (NCDB) and incorporated data on age, disease grade and stage and neoadjuvant chemoradiation, among other factors.

  Roswell Park researchers led by **Steven Nurkin, MD, MS, FACS**, developed a user-friendly point-of-care mobile risk calculator to assist in decision-making regarding the potential benefit of surgical resection for hepatocellular carcinoma (HCC). The analysis was based on National Cancer Data Base records for 5,455 HCC patients. This web-based tool accurately predicted overall survival at one, three and five years. Significant factors associated with survival included age, sex, Charleson-Deyo score, histology, grade, tumor size, node status, clinical stage, AFP level, presence of cirrhosis, surgery, margin type and adjuvant therapy. Ongoing research using this calculator will incorporate perioperative outcomes into the decision-making process.

***Community Support & Advocacy***

- Empire State Development (ESD) President, CEO & Commissioner **Howard Zemsky** and RPCI President & Chief Executive Officer **Candace S. Johnson, PhD**, announced that following the **NYS Trade Mission to Cuba**, RPCI has signed an agreement with **Cuba's Center for Molecular Immunology (CIM)** to develop a unique lung cancer vaccine, CimaVax, with a clinical trial in the United States. RPCI has partnered with the CIM through academic and preclinical research exchanges since 2011.

  Leaders from business and higher education joined New York's trade mission to Cuba on April 20 and 21 – the first Governor-led state trade mission to Cuba since President Obama began the process to normalize diplomatic relations between the United States and Cuba. Roswell Park was represented on the trade mission by Dr. Johnson, who is also Wallace Family Chair in Immunology at the Institute, and Jacobs Family Chair in Immunology **Dr. Kelvin Lee**.

- **Pactimo**, a Colorado sports apparel company, debuted a new "Riding to Cure Cancer" cycling jersey in support of **The Ride For Roswell**, the largest single-day cycling fundraiser in North America. For each jersey that's sold, Pactimo will donate $25 to Roswell Park. Funds raised through jersey sales will support the Institute's cutting-edge research and patient care programs. Donations are further used to improve the patient and family experience, support new clinical treatments, provide proper clinical space to meet the growing demand for cancer services and educate the next generation of cancer scientists and clinicians.

- More than 35 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.

- Roswell Park oncologists applauded actress Rita Wilson for drawing attention to the importance of second opinions regarding cancer diagnosis and treatment. As she announced her recent double mastectomy and reconstructive surgery following a diagnosis of invasive breast cancer, Wilson noted that her cancer was confirmed only when she sought a second opinion. Roswell Park breast surgeons **Dr. Helen Cappuccino**, Assistant Professor of Oncology, and **Dr. Shicha Kumar**, Assistant Professor of Oncology, praised Wilson for sharing her experiences to educate others. Both said they always encourage patients to seek out additional medical opinions before finalizing any plans for cancer treatment.

- In the early part of the 20th century, most people died of infectious diseases, with tuberculosis and influenza heading the list. But even as antibiotics, better hygiene and sanitation drove down those death rates, a new and largely preventable threat moved in: obesity. Today the top two causes of death in the U.S. are heart disease and cancer, with diabetes closely following, and obesity is strongly associated with all three. **Rodney Haring, PhD, LMSW**, Assistant Professor of Oncology, Office of Cancer Health Disparities Research, is working to change that trend, especially among Native Americans, who have higher-than-average rates of obesity, diabetes, heart disease and stroke, and specific types of cancer. With an $86,000+ award from Roswell Park's Cancer Center Support Grant, he's creating a workplace program to educate Native Americans about maintaining a healthy weight to prevent the life-threatening diseases that obesity can cause.

- **Candace S. Johnson, PhD**, President & CEO of RPCI and Wallace Family Chair in Translational Research, was the featured speaker at the **Women in STEM Seminar and Networking event** on Wednesday, May 6. Dr. Johnson offered remarks in a presentation titled "Women in STEM: Progress and Challenges." The program is an opportunity to bring people together who support women who are looking for or already have careers in the fields of science, technology, engineering and math. The event is hosted by **Buffalo Women in STEM** and the **WNY STEM Hub**, an organization that facilitates collaborations among business, education, community organizations, arts and cultural organizations, and government entities to advance the interdisciplinary teaching and learning of science, technology, engineering, the arts, and mathematics in support of sustained economic and intellectual vitality in our five-county region.

- RPCI and the **University at Buffalo (UB)** have been granted accreditation by the **Commission on Dental Accreditation** for a newly created general-practice dental residency program. Students in the one-year program will rotate between the UB Dental and RPCI Dental Services. The training program is designed to provide qualified graduates of dental schools with a fundamental knowledge of the multidisciplinary care of oncology patients, along with in-depth practical training in dental care for these patients. Residents will receive instruction and hands-on education in the treatment of patients who have been recently diagnosed with head and neck cancers, as well as education in comprehensive dental treatments for patients who are either undergoing active cancer therapies or are in remission. Residents also will have the opportunity to participate in current research projects involving the early detection of oral cancer in high-risk

patients. University at Buffalo faculty will oversee the residents' academic and clinical training. Residents at Roswell Park will spend approximately 70% of their time in the clinical care of patients, under the supervision of academic and practicing dental clinicians specializing in oncology.

- RPCI's Breast Cancer and Gynecologic Oncology Teams engaged with more than 1,000 women at the **La Femme Women's Expo** on April 26, 2015. Information and resources were shared on the prevention, detection and treatment of all types of cancer. **Dr. Sara Majewski**, **Dr. Stacey Akers**, **Dr. Amy Early**, **Dr. Kilian Salerno**, **Dr. Jessica Young**, **Dr. Tracey O'Connor**, **Dr. Emese Zsiros** and **Dr. Wong Moon** attended to answer questions from the public. Additionally, 10 Roswell Park cancer survivors walked down the runway and were honored by the crowd.

- On May 1, 2015 Roswell Park hosted a **free skin cancer screening** event open to the public. More than 200 attendees received screenings from Roswell Park physicians.

- **The Society of Nuclear Medicine and Molecular Imaging, Eastern Great Lakes Chapter (SNMMI-EGLC)**, held its annual meeting at RPCI on May 8 and May 9, 2015. The title of the meeting was: Education and Advocacy, Nuclear/Molecular Imaging and the Future. The keynote presenter for the meeting was **Robert Wah, MD**, President of the American Medical Association (AMA).

- Research found no racial or ethnic disparities among patients who participate in the **Blood and Marrow Transplantation (BMT) Program** at RPCI. The results were published in the journal *Biology of Blood and Marrow Transplantation*. **Theresa Hahn, PhD**, Professor of Oncology in the Department of Medicine at RPCI and senior author of the study, notes that while rates of hematologic malignancy referrals and use of BMT for minorities may appear low (less than 10%), they closely reflect both the racial distribution of all BMT cases and the general population within the 8 Western New York counties surrounding the Buffalo cancer center. The population-based cohort study included more than 1,100 patients, primarily from eight Western New York counties. Race and ethnicity were based on self-report at the time of initial registration at RPCI.

  The study also examined participation in various research initiatives, including clinical trials, scientific surveys and contributions to the **RPCI DataBank and Biorespository**. Participation in clinical trials was similar for European Americans (62%) and African Americans (57%). A high proportion of African Americans (95%) provided a biospecimen for future research, which was identical to the rate for European Americans. However, European Americans are more likely than African Americans to participate in survey research (43% versus 17%, respectively). Potential reasons for this difference may include the length of the survey (45-47 pages), how often patients are asked about research participation and who approaches them. Further studies will help illuminate this finding. **Philip McCarthy, MD**, Director of the BMT program at Roswell Park was a co-author of the study.

- Following unprecedented success of a new Canada route for The Ride For Roswell, interest in the new **Empire State Ride** and exciting biker-friendly re-development plans, RPCI announced a long-term commitment for its biking events to route through or conclude in Niagara Falls, N.Y. **Niagara Falls, N.Y. Mayor Paul Dyster** joined Mitch Flynn, Founder of The Ride For Roswell, at an announcement and shared his biker-friendly redevelopment plans with The Ride team.

- The **American Association for Cancer Research (AACR)** hosted a capitol briefing titled "Electronic Cigarettes: What You Don't Know Can Hurt You" in room H-137, U.S. Capitol, Washington, DC on Thursday, May 14. The event was hosted in collaboration with Representative Jackie Speier (CA) and Senator Richard Blumenthal (CT). **Maciej Goniewicz, PhD, PHarmD**, Assistant Professor of Oncology, Department of Health Behavior at Roswell Park was a featured panelist. The event offered insights regarding the complex regulatory issues and public health concerns surrounding electronic cigarettes.

- RPCI joined a coalition of leading public health organizations calling for inclusion of electronic cigarettes (e-cigarettes) in the **New York State Clean Indoor Air Act**. The organizations announced their support during a May 13 news conference in the New York State Legislative Office Building in Albany. In addition to Roswell Park, the organizations are the American Cancer Society Cancer Action Network (ACS CAN); American Heart Association/American Stroke Association (AHA); American Lung Association (ALA); the Medical Society of the State of New York (MSSNY); Campaign for Tobacco Free Kids (TFK); League of Women Voters (LWV); New York Health Plan Association (HPA); County Health Officials of New York (NYSACHO); New York Chapter American College of Physicians Services Inc.; Americans for Nonsmokers' Rights; New York State Academy of Family Physicians; and the New York State Public Health Association. **Mark Travers, PhD**, Research Scientist in the Department of Health Behavior and Director of the Air Pollution Exposure Research Laboratory at Roswell Park spoke at the news event.

- RPCI teamed up with Country **106.5 WYRK** for the Taste of Country concert on Friday, June 12. Country music fans got their chance to purchase light-up cowboy hats to benefit life-saving cancer research. The total raised by lighting up Coca-Cola Field was $20,000.

- 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 2015, including the **Susan G. Komen Race for the Cure (**28 Team Roswell members), **American Cancer Society Making Strides Against Breast Cancer Walk** (35 Team Roswell members) and **Bosom Buddies Walk** (58 Team Roswell members). Each event raised awareness and funds for breast cancer detection, treatment and research.

- Roswell Park Cancer Institute was named a beneficiary of the **J.P. Morgan Corporate Challenge in Buffalo**. The annual 3.5-mile run took place June 25 in Delaware Park and on behalf of the more than 11,000 entrants expected, J.P. Morgan made a $15,000 donation to **Roswell Park's Angel Fund**, which assists cancer patients who are in need of financial assistance. There are times when some of the more than 31,000 patients and their families at Roswell Park experience extraordinary financial distress causing them additional challenges following their cancer diagnosis and while receiving their personalized cancer treatment. The Angel Fund Program makes funds available to assist those patients. The program provides services such as travel to and from appointments, meals, gas, lodging, and sometimes co-pays — to serve as a bridge until Medicare coverage begins — for qualifying low-income patients. The Department of Psychosocial Oncology administers the fund according to legal and regulatory requirements. Roswell Park had another large presence at the race with a team of 113 employees. In addition, Roswell Park once again created inspiring t-shirts for Team Roswell members to wear with pride.

- Many teens with cancer are unable to attend their high school's prom because of their diagnosis. But in Western New York, a social support program at Roswell Park called **Teens Living with Cancer (TLC)** is helping to ensure that these teens don't have to miss the milestone occasion. TLC hosted its second annual prom for teen cancer survivors and patients. The event allows the teens to enjoy prom with other high schoolers who understand what they're going through.

- **Kunle Odunsi, MD, PhD**, Cancer Center Deputy Director, Executive Director of the Center for Immunotherapy, and Chair of the Department of Gynecologic Oncology at RPCI was a featured presenter during the special consortia of the 2015 annual meeting of the **New York State Stem Cell Science Program (NYSTEM)**, Thursday, May 14 at Rockefeller University, New York, NY. At Roswell Park, Dr. Odunsi is the lead investigator of a prestigious grant of nearly $12 million from **NYSTEM** which is designed to develop new therapies for advanced ovarian cancer. The four-year, $11.9 million grant to RPCI is one of three new state awards totaling $36 million to support innovative approaches for developing stem-cell based therapies for diseases that are notoriously hard to treat.

- **Andrew Hyland, PhD**, Chair of the Department of Health Behavior at RPCI was a featured speaker at the **New York State Cancer Prevention Summit**, Wednesday, May 20 in New York City. The Summit brought together national experts in medicine, public health, scientific research and public policy to explore ways to save lives and reduce the overall burden of cancer. Dr. Hyland offered information and insights in tobacco use prevention during the discussion session, titled Cancer Prevention in Action: Using Policy to Support Cancer Prevention. Substantial progress has been made to decrease tobacco use since the first U.S. Surgeon General's Report on smoking, yet tobacco use remains the leading cause of preventable deaths in New York State. Dr. Hyland calls upon the health care community to renew its commitment to tobacco control.

- **Erie Canal Harbor Development Corporation (ECHDC)** celebrated the early success of the Queen City Bike Ferry. Since its launch in May 2015, the ferry has already surpassed 10,000 riders. The brand new multihull craft carries pedestrians and their bikes across the Buffalo River from Canalside to the First Buffalo Marina. A very special 8-year-old boy was invited to represent the 10,000$^{th}$ passenger of the Queen City Bike Ferry. Luke Gworek, who is being treated for acute lymphoblastic leukemia at RPCI, came aboard with his family to make the river crossing. Luke is a member of Carly's Club for Kids & Cancer Research in WNY, which offers support programs and fun activities for children diagnosed with cancer.

- **The Ride For Roswell**, the single largest fundraising event in Western New York and North America's largest single-day cycling fundraiser, concluded its 20th year by raising a total of $4.5 million for cancer research and patient-care programs at RPCI. Ride Weekend involved more than 8,000 participants, 2,000 volunteers and countless other supporters, and the event once again set a fundraising record. Over the past 20 years, The Ride has raised more than $30 million for RPCI, and more than 80,000 riders and 20,000 volunteers have participated in the event. The weekend began on Friday with the Peloton, a 12-mile route from Roswell Park to UB that is reserved for top fundraisers. Before departing, the riders stood outside of RPCI with names of patients in their hands while reaching up to the hospital windows in a salute to cancer patients who were looking out. The Peloton riders then rode in two-by-two formation from RPCI through

the City of Buffalo and into UB Stadium as part of Roswell Park's Celebration of Hope. The Celebration of Hope, a community-wide rally against cancer, included a Mindfulness Workshop for cancer survivors and their loved ones, family-friendly tailgate activities and an inspirational and emotional stage program featuring the arrival of the Peloton and an Olympics-style procession of cancer advocates, researchers and cancer survivors. The night concluded with a concert by country music star and cancer advocate Kellie Pickler.

- America's oldest cancer center and one of the world's newest oncology centers are partnering to improve access to cancer prevention, screening and care for the people of Nigeria. RPCI and **Lakeshore Cancer Center (LCC)** announced an affiliation that will see Roswell Park faculty providing clinical consultations to assist LCC oncologists, who will also have access to both training at RPCI and continuing professional education seminars they can participate in remotely. The partnership addresses a striking need for oncology sub-specialty care in **Nigeria and West Africa**, says Lakeshore Cancer Center CEO and Medical Director **Chukwumere "Chumy" Nwogu, MD, PhD, FACS**, who Professor of Oncology at Roswell Park and an Associate Professor of Surgery at the University at Buffalo School of Medicine and Biomedical Sciences.

- The **Empire State Ride**, a fully-supported, seven-day, 518-mile biking adventure across New York state, launched in August with participants from Massachusetts, Pennsylvania, France and New York. The route, which followed NY Route 5, averaged 74 miles per day and took riders through some of the most scenic parts of New York State. The ride concluded in Niagara Falls State Park on Saturday, Aug. 22 in front of one of the natural wonders of the world. This first-time event raised nearly $55,000 for RPCI. Cancer advocates and bicyclists were invited to sign up for the 2016 Empire State Ride, starting in November.

- RPCI promoted **Laura Krolczyk** to Director of State Relations within the Office of Government and Community Relations. In her new capacity, Krolczyk is Roswell Park's primary representative with New York state, leading the Institute's interactions with the governor's office, the Legislature, and with state agencies in Albany.

- **Russell Salvatore** is providing **free TV service** for patients and their families as the result of a generous donation to RPCI. The prominent Buffalo businessman's gift of $400,000 gives all patients admitted at Roswell Park a sense of comfort and allows them to enjoy television free-of-charge throughout their hospital stay. Salvatore, the owner of Russell's Steaks, Chops & More and Salvatore's Grand Hotel, made the announcement of his donation at Roswell Park. During the event, Salvatore tore up a mockup of a patient's TV bill — a bill that patients will no longer be receiving, thanks to his generous donation. Attendees also watched a warm and welcoming video message from Salvatore that patients and families will see when they turn on the TVs in their hospital rooms.

- From mid June through mid August, students from high schools across Western New York learned about robot-assisted surgery using the same RPCI curriculum that is used to train surgeons from around the world. The **Junior Robotic Surgery Challenge** introduces participants to various career opportunities within health care using hands-on, practical exercises and classroom instruction as well as guest lectures from accomplished professionals. This innovative program, designed by **Khurshid Guru, MD**, Director of the **Roswell Park Center for Robotic Surgery,** and Eileen O'Brien, PhD, a science educator and founder of Learning Triangle Labs LLC, brought 70 students from 30 area public and private high schools to RPCI and affiliated sites for an intensive 8-week course on the fundamental skills of robot-assisted surgery.

- Nearly 700 RPCI supporters raised $160,000 for Carly's Club at two of the summer's signature fundraising events, **Carly's Crossing** and **Summer Splash**. The funds raised will allow Carly's Club to fund lifesaving pediatric cancer research and provide support programs for children with cancer and their families. The weekend kicked off on Friday with Summer Splash, a cocktail party held on the waterfront at Buffalo Harbor State Park. The event featured gourmet cuisine from Buffalo's finest restaurants, music, dancing and prizes. On Sunday, nearly 300 swimmers took part in a unique open-water swim event, Carly's Crossing, at Gallagher Beach at Buffalo Harbor State Park.

- RPCI researchers together with input from African-American community leaders in Buffalo, have created an outreach effort that provides racial/ethnic minority and medically underserved communities with educational programs regarding the public's participation in biomedical research. The program is the basis of a study published by a team of local collaborators. The goal of this study was twofold: first, to create a collaborative, transparent relationship between academics and the Western New York community; and second, to produce practical and user-friendly educational tools for introducing biomedical innovation to diverse members of the community and measure the impact of these tools.

  **Deborah Erwin, PhD**, is senior author of the paper and Director of the Office of Cancer Health Disparities Research at RPCI. Cancer survivor and President of the **First Ladies of WNY,** Narseary Harris, who is a co-author of the study, and other members of the RPCI Community Advisory Board assisted with recruiting participants for the study, reviewing and commenting on the manuscript, providing specific text and contributing to the presentation as part of the tools used by Roswell Park to tailor the program. Initial RPCI pilot studies that informed the educational program were led by **Elisa Rodriguez, PhD,** Director of the Community Engagement Resource in the Office of Cancer Health Disparities Research and the Center for Personalized Medicine at RPCI.

- A group of retired firefighters dedicated to raising funds for cancer research visited RPCI in late August to make a significant donation that was earmarked for urologic cancer research, which includes prostate, bladder and kidney cancers among others. The firefighters are members of the **Retired Professional Fire Fighters Cancer Fund**, a nonprofit organization based in Binghamton, N.Y. Their $12,000 donation will provide critically needed funding for new, promising research projects for a variety of urologic cancers. The gift is part of the Institute's Friends of Urology initiative, which works to raise funds for pilot studies and to spread awareness of all urologic cancers.

- Patients and survivors treated for rare neuroendocrine cancers, along with their families, were invited to an informational networking event, the Neuroendocrine Tumor (NET) Patient Regional Meeting, hosted by RPCI. At this year's meeting, Roswell Park physicians and care team members staged a multi-disciplinary conference with real cases. Attendees, including 85 NET patients and their caregivers, got a chance to see what it's like "behind the scenes" of their care. The keynote address "Why Should I Be My Own Advocate?" was presented by Maryann Wahmann, President, **Neuroendocrine Cancer Awareness Network (NCAN)** and Carcinoid Survivor. 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 Hana Choi, PhD, formerly of RPCI.

- The **U.S. Food and Drug Administration** (FDA) hosted an Ovarian Cancer Endpoints Workshop with presentations by the Society of Gynecologic Oncology, the American Association for Cancer Research and the American Society of Clinical Oncology, along with invited guest speakers, including Deputy Director of Roswell Park, **Kunle Odunsi, MD, PhD, FRCOG, FACOG.** Dr. Odunsi's presentation, "How do we study immunotherapy?," was viewable to the public via a streaming webcast. Dr. Odunsi offered insights into non-cellular immune-based therapeutic strategies. Immunotherapy—using the power of the immune system to fight cancer—is an important scientific research area. This kind of treatment holds the promise of destroying cancer cells more effectively and with fewer side effects than other therapies.

- **Labatt USA** and **Tops Friendly Markets** have announced a more than $13,000 donation to The Ride For Roswell 2015. Through the "Make Every Case Count" program, a portion of the proceeds from Labatt products sold throughout the month of June in participating locations – including Tops Friendly Markets stores statewide, Applebee's and Kenyon's Variety – were donated to The Ride. Funds raised through The Ride For Roswell benefit research and patient-care programs at RPCI.

- The **Department of Pathology and Laboratory Medicine** opened a **School for Cytotechnology** in conjunction with **Daemen College**. The department provides lectures and clinical experience which leads to the award of a Master's Degree in Cytotechnology and prepares graduates for their New York State licensing.

- Four hundred individuals participated in the annual **Bosom Buddies Walk** held in East Aurora and raised more than $76,000 to support breast cancer patients. All of the funds raised will stay local and benefit the **Western New York Breast Resource Center** and breast cancer research at RPCI. The Breast Resource Center, located at Roswell Park, is entirely funded by donations and is free and open to the public. The Center provides patients and their families with a wide range of breast cancer information and referrals to services like support groups, financial assistance programs and transportation services. The Center has also provided more than $65,000 in wigs to patients free-of-charge since 2012. Since its inception in 1995, the walk has raised more than $1 million for the Breast Resource Center and for the most cutting-edge breast cancer research at Roswell Park.

- RPCI faculty member and researcher **Rodney Haring, PhD, MSW**, presented his research, "Adapting assessment tools to measure obesity and cancer prevention: diet, physical activity, workplace productivity, and cancer knowledge" during a webinar hosted by the **AcademyHealth/Aetna Foundation Scholars in Residence Fellowship Program**. Dr. Haring offered insights into his research projects which address workplace health initiatives about maintaining healthy lifestyles to prevent cancer and other life-threatening diseases caused by obesity. An Assistant Professor of Oncology within the Department of Cancer Prevention and Population Sciences at Roswell Park, Dr. Haring is the recipient of an **Academy Health/Aetna Foundation Scholar in Residence Fellowship for 2015.**

- **Philip L. McCarthy, MD,** Professor of Oncology and Director of the Blood and Marrow Transplant Program at RPCI, was welcomed as a **Managing Myeloma world expert** to present "Selecting Patients for Maintenance or Continuous Therapy Including Regimen Selection and Duration of Treatment." Offered three times between Sept. 15–17, Dr. McCarthy's talk was targeted to physicians, pharmacists, physician assistants, nurses, and other health care

professionals who have an interest in enhancing their clinical skills in the management of multiple myeloma.

- The **Ralph C. Wilson, Jr. Foundation** announced a milestone $4.2 million donation to RPCI's quality-of-life programs — marking the Foundation's first announced gift and kicking off the group's distribution of its **2015 Transitional Legacy Grant Program**. The donation will fund compassionate care programs that address the emotional, spiritual and social needs of the more than 31,000 patients and their families who turn to Roswell Park every year for hope. Mary Wilson, Ralph C. Wilson, Jr. Foundation Trustee, along with Mary Owen, Executive Vice President and Trustee, announced the gift at RPCI with **Candace S. Johnson, PhD**, RPCI President and CEO, and **Lee Wortham**, Chair, Roswell Park Alliance Foundation.

- One of the most experienced and trusted oncology practices in Niagara County has added services and resources through a new affiliation with RPCI. With RPCI Oncology P.C.'s acquisition of **Cancer Care & Hematology of Niagara**, the oncology practice that **Mohamed S. Ahmed, MD, PhD**, has led since 2008 continues to operate out of 2931 Military Rd. in Niagara Falls, N.Y., under the name Roswell Park Hematology Oncology of Niagara. Dr. Ahmed and his team will continue to provide comprehensive and compassionate care, specializing in the diagnosis and treatment of cancer and blood disorders through chemotherapy, infusion therapy and referral to radiation oncology. Along with Roswell Park Niagara, the surgical-oncology satellite location RPCI has operated in Wheatfield, N.Y., since 2012, Roswell Park Hematology Oncology of Niagara will make a comprehensive slate of cancer treatments, multidisciplinary case review and supportive care available to residents of Niagara County and the Northtowns around Buffalo.

- Roswell Park experts made their expertise available to audiences around the world by continuing its series of hour-long, live **Cancer Talk web chats** in October with Breast Cancer Talk: What it Means to Be High Risk, drawing 144 viewers.

- RPCI invited all those touched by lung cancer or wishing to learn more about this disease to the sixth annual **Breath of Life Celebration** on Nov. 7. Hosted by the Roswell Park Thoracic Cancer Team, this free event offered more than 150 lung cancer patients, survivors, families and friends an opportunity to gain information about new approaches to lung cancer surveillance, treatment, research and survivorship. The event kicked off Lung Cancer Awareness Month commemorations at RPCI.

- **The Kelly family** — Jim, Jill, Erin and Camryn — was honored at **All Star Night**, RPCI's signature black-tie gala, for their incredible cancer awareness and advocacy efforts. Jim Kelly, former Buffalo Bill and Hall of Fame quarterback, was diagnosed with oral cancer in 2013. Since then, he and his family have openly shared their battle through national media interviews and social media, helping to spread cancer awareness and inspire countless patients and their families to be "Kelly Tough." The Kelly family received the Katherine Anne Gioia Inspiration Award.

- All Star Night marked the 25th anniversary of the Alliance Foundation, which was founded by Anne and Donna Gioia. **Candace S. Johnson, PhD**, RPCI President & CEO and Wallace Family Chair in Translational Research, announced for the first time that Roswell Park's new pediatric center will be named the **Katherine, Anne and Donna Gioia Pediatric Hematology Oncology Center** in honor of all the family has done for the fight against cancer. A mosaic portraying the

family, created by local artist Ani Hoover, was unveiled at the event that will be placed in the new center when it opens in 2017.

The event, which raised more than $500,000 for Roswell Park, also included recognition of **Khurshid Guru, MD**, Roswell Park's Director of Robotic Surgery, who received the **Thomas B. Tomasi, MD, PhD, Hope Award**. The award is given out each year to a physician who has brought significant hope to cancer patients through scientific achievements. Dr. Guru has pioneered robotic surgery at Roswell Park and is regarded as one of the top robotic surgeons in the world.

- RPCI's annual **Tree of Hope** lighting ceremony was held on Friday, Dec. 11, in Kaminski Park and Gardens on the Roswell Park campus. This free, family-friendly event, is held in honor of all who are touched by cancer, and features holiday activities such as live music, visits with Santa and Mrs. Claus, face painting and a gingerbread house raffle. The event is co-sponsored by **WGRZ 2 On Your Side** and **West Herr Automotive**. The festivities were hosted by Channel 2's Maryalice Demler and Kevin O'Connell, and culminated with the lighting of the Tree of Hope by a cancer survivor from Carly's Club for Kids & Cancer Research in WNY.

- Three current **Buffalo Sabres** players and one alumnus shaved their heads on Saturday, Feb. 20 as part of the **Bald for Bucks** program, which raises money for RPCI. Current Sabres Mike Weber, Mark Pysyk and Robin Lehner, as well as Sabres alumnus Marty Biron, raised funds and their efforts culminated in a group shave performed by their Sabres teammates. Cancer patients and Sabres fans were in the audience at First Niagara Center to watch the event.

- RPCI joined with all the top cancer centers across the nation in issuing a statement urging for increased **HPV vaccination** for the prevention of cancer. Recognizing that insufficient vaccination is a public health threat, these leading institutions called upon the nation's physicians, parents and young adults to take advantage of this rare opportunity to prevent many types of cancer. In a consensus statement, the nation's cancer centers say, "HPV vaccination is our best defense in stopping HPV infection in our youth." With 100 percent participation, all 69 NCI-designated cancer centers joined this effort, which appropriately coincides with the launch of a national "moonshot" to cure cancer, a collaborative effort announced in President Barack Obama's State of the Union address and led by Vice President Joe Biden.

- **Tobacco-Free Western New York** administers three programs in the nine counties of Western New York: Tobacco-Free Chautauqua, Cattaraugus and Allegany (CCA) in Olean; Tobacco-Free Genesee, Livingston, Orleans and Wyoming (GLOW) in Batavia and Tobacco-Free Erie-Niagara (EN) at RPCI. During this fiscal year, the program was effective in reducing the impact of tobacco by supporting adoption of policies around **smoke-free outdoor air and tobacco-free housing**, and by **educating thousands of youth advocates, elected officials and community leaders** regarding tobacco marketing by retailers. As a result, countless citizens across Western New York enjoy healthier communities.

- Cancer health disparities are complex and are caused by persistent societal problems that result in greater suffering and poorer health among racial, ethnic, and underserved groups. The most obvious factors are associated with a lack of health care coverage and low socioeconomic status. Through its **Office of Cancer Health Disparities Research (OCHDR)**, RPCI 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. Key programs designed to reach out to these populations include the **Buffalo/Niagara Witness Project**, which teaches the importance of early cancer detection through stories told by breast and cervical cancer survivors, hosted in churches and community settings; **Esperanza y Vida**, a bilingual program aimed at increasing breast and cervical cancer screening in Latinas living in both urban and rural areas, and helping to reduce barriers to cancer care; and **MANUP (Men Allied for the Need to Understand Prostate Cancer) Buffalo**, provides information to help men of color, especially, make informed decisions about prostate cancer screening, treatment and survivorship. Through these programs and others, during this fiscal year, the OCHDR was able to effectively reach out to 3,762 individuals representing various racial, ethnic, and underserved groups throughout the Western New York region:

  - OCHDR's programs and initiatives facilitated 233 community outreach activities (about 30 per month).
  - Of the 3,762 individuals reached, 3,235 of them represented a minority group.
  - Of the 3,762 individuals reached, 1,598 were eligible to receive some type of early cancer screening.
  - Of the 1,598 individuals eligible to receive a cancer screening, 983 of them did receive a screening.

- A departmental library was dedicated to honor **Dr. T. Ming Chu**, Chair Emeritus of Diagnostic Immunology Research and Professor Emeritus of Urologic Oncology. Dr. Chu is a world renowned cancer researcher. He is credited with discovering the prostate-specific antigen – a test that has been in use now as a screening tool for prostate cancer since 1994.

- As a sponsor of the **Insane Inflatable 5k**, Roswell Park teamed up with TownSquare Media to bring the cancer message to audiences in Buffalo with a presence at the Insane Inflatable events, reaching thousands of people. Roswell Park employees also rallied to form a team of nearly 100 participants.

- **The Ride For Roswell**, presented by West Herr Automotive Group, launched registration for its 2016 event to be held on June 24 and 25. Cancer advocates, community members and bicyclists of every skill level were encouraged to sign up to ride, volunteer or donate to the cause. The 2016 fundraiser will feature new and expanded route options, including an additional 10-mile route — a classic and beloved river route option —as well as a 20-mile Olmsted route that will start at RPCI, take riders along Frederick Law Olmsted's famed parkways and include a rest stop at the historic H.H. Richardson Center. Ride Weekend will begin on Friday, June 24 with the Peloton, a 12-mile route that is reserved for top fundraisers who will each raise $1,000 or more. The Peloton riders will ride in two-by-two formation from RPCI through the City of Buffalo and into the University at Buffalo as part of the Celebration of Hope, a community-wide rally against cancer. On Saturday, June 25, after months of fundraising efforts, thousands of riders will embark from both UB and RPCI on routes ranging from 3 to 102 miles.

- Roswell Park partnered with **Live Nation** as a sponsor of the 2015 summer concert series at the Darien Lake Performing Arts Center in Darien Center, NY. Concert goers at each of the 24

concerts were given the opportunity to support the cancer mission with the purchase of 50/50 raffle tickets and were greeted with Roswell Park messaging at each event.

- The 2016 Applause for Hope program, initiated by the **Theatre Alliance of Buffalo (TAB)**, took place from mid-January through mid-March. This collaborative fundraising effort supports both RPCI and TAB. A majority of TAB member theaters collected post-performance donations toward the effort. This was the fourth year of Applause for Hope, which, to date, has raised more than $26,000 for RPCI. A portion of the funds raised from Applause for Hope in 2016 will support the creation of a Pediatric Hematology Oncology Outpatient Center at RPCI, in a joint partnership with the new John R. Oishei Children's Hospital and the University at Buffalo.

- Cancer patients in WNY and surrounding areas have greater access to expert oncology care as a result of a new collaboration between RPCI and **Buffalo Medical Group P.C. (BMG)**. The two oncology providers have implemented a clinical-care partnership that will see gynecologic oncologists from Roswell Park's staff seeing patients at BMG's Orchard Park location, 3900 North Buffalo Rd., and two of BMG's medical oncologists will be providing care to patients at Roswell Park. Both elements of this groundbreaking collaboration will translate to better access to care and integration of care for cancer patients. Importantly, these collaborations will bring access to clinical research studies for BMG patients. **Shashikant Lele, MD, FACOG**, Clinical Chief of Gynecologic Oncology and Clinical Chair of the Division of Surgical Subspecialties at Roswell Park, and **Emese Zsiros, MD, PhD, FACOG**, Assistant Professor of Oncology within the Department of Gynecologic Oncology and the Center for Immunotherapy at Roswell Park — both fellowship-trained gynecologic oncologists — will see patients at BMG Orchard Park on alternating Thursdays. Seeing patients at Roswell Park on a part-time basis will be BMG oncologists **Hong Liu, MD, PhD**, and **Victor Yosuico, MD, MSc**, fellowship-trained medical oncologists who will be providing care to patients with gastrointestinal and melanoma/sarcoma/soft-tissue cancers, respectively.

- During this fiscal year, the **Office of Diversity & Inclusion** held 12 Resume Writing classes in the community: three at UB Gateway, three at the Buffalo Niagara Medical Campus' Innovation Center/D!G, four at the Moot Center and two The Belle Center of WNY. In total, 75 people attended these classes and five people were hired at RPCI as a result of skills learned. The office also participated in community job fairs at the Buffalo Employment and Training Center, Hispanics United, The International Institute, Delevan-Grider Community Center and the University at Buffalo Educational Opportunity Center. Twenty people were hired at RPCI as a result of these job fairs. Outreach events were promoted to community members within underserved communities through a collaboration with the Office of Cancer Health Disparities Research, which placed advertorials in Buffalo-area diversity newspapers, including *Panorama Hispano News*, *The Challenger* and the *Criterion.*

- United behind the shared vision of reducing cancer's impact in WNY, the **Buffalo Sabres** and RPCI have launched a collaboration that will see the National Hockey League franchise and the NCI-designated comprehensive cancer center teaming up to arm fans and supporters with important guidance on cancer risk, prevention and research. Over the next five seasons, the two organizations will initiate a broad-based educational campaign with the tagline **"One Goal: Inspire Cancer Cures."** Roswell Park, the official and exclusive comprehensive cancer center of the Buffalo Sabres, will provide evidence-based tips on cancer prevention, early detection and risk reduction to hockey fans and audiences through a variety of platforms, inside and

outside of First Niagara Center, the home of the Buffalo Sabres. Fans will also have the opportunity to support the most promising research at Roswell Park through donations and will be able to take advantage of free cancer screening programs, as medically appropriate. Throughout the season — including the **Hockey Fights Cancer** event, which was held in October, during the Sabres' home game against the New Jersey Devils — fans supported Roswell Park's efforts, and more than $36,000 was raised for research conducted at the cancer center.

- A new Roswell Park television commercial that debuted during CBS' Super Bowl 50 broadcast highlighted the energy and dedication patients can expect from "Team Roswell." The ad features Roswell Park Deputy Director **Kunle Odunsi, MD, PhD, FRCOG, FACOG** and former Buffalo Bills wide receiver/special teams player Steve Tasker, now an analyst with CBS Sports, introducing members of Team Roswell's starting lineup as more than two dozen Roswell Park pumped-up, face-painted employees cheer on their colleagues. Sharing insights on her strategy for the team is "Coach" **Candace S. Johnson, PhD**, Roswell Park's President & CEO and Wallace Family Chair in Translational Research.

- In a demonstration of unprecedented regional commitment to fighting colorectal cancer, RPCI joined other local health care systems and health insurers in pledging support for the **American Cancer Society's 80% by 2018 i**nitiative, an effort to make sure that 80% of adults age 50 and older are getting recommended screening for colorectal cancer by 2018. Currently, 71.7% of adults in Erie County, NY, are up to date with recommended colorectal cancer screening. Signing the 80% by 2018 pledge on behalf of Roswell Park at Buffalo City Hall was Deputy Director **Kunle Odunsi, MD, PhD**.

- More than 55 RPCI employees and supporters went **Bald for Bucks** to raise funds for the fight against cancer, and to show their support for patients and their families. The group came together to raise more than $40,000 for RPCI's research and patient-care programs. Employees from a wide range of departments took part in Team Roswell's annual Bald for Bucks event, with the roster of participants including nurses, data managers, researchers and administrators, as well as community members. The team was led by captain, **Mukund Seshadri, DDS, PhD**, Associate Professor of Oncology, Department of Pharmacology and Therapeutics.

- **Governor Andrew M. Cuomo** announced the dedication of the Commercial Street Bridge at Canalside as the "**Roswell Park Cancer Institute Bridge of Hope."** There is a widespread tradition at cancer centers throughout the country that when a cancer patient finishes treatment, he or she celebrates by ringing a bell. From this iconic location in the City of Buffalo, the Bridge of Hope at Canalside gives cancer survivors the opportunity to hang a bell to honor their survivorship. As part of the dedication, more than 150 patients and survivors from RPCI gathered at the bridge to celebrate surviving cancer with a ceremonial hanging of ornamental bells on the bridge. The ceremony was hosted jointly by Roswell Park and Canalside.

- RPCI provided sponsorship of the **American Lung Association's Fight for Air Climb of Buffalo**. A group of more than 30 employees participated in the event, raising nearly $6,000 before climbing 37 flights of stairs at the annual event.

- RPCI and the **Buffalo Sabres** partnered to offer free **prostate cancer screening** for eligible men. The March 24 screening event, the first to be held as part of the One Team, One Goal: Together

to Beat Cancer campaign, is part of a broader effort to reduce cancer's impact among the team's fans.

- The **Yroswell Street Team** brought the message of cancer awareness to the community, especially Western New York's young people, at **61 events**. The Institute also encouraged high school- and college-aged students 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, Bosom Buddies Walk, Komen Run/Walk, Tree of Hope, the RPCI Junior Robotic Surgeon Challenge Program, Hockey Fights Cancer Night at First Niagara Center, Kissmas Bash, UB Speaker Series and more.

- 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. 119 blogs were posted, with approximately 262,315 total unique page views in fiscal year 2016. 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.

- In March, Roswell Park and the **Buffalo Sabres** hosted a **free prostate screening** event at First Niagara Center. More than 230 men received screenings from Roswell Park doctors. Additionally, throughout the year, the Sabres spread cheer by visiting Roswell Park patients.

- RPCI encourages opportunities for minority business enterprises (MBE), woman-owned enterprises (WBE), small businesses and other disadvantaged business programs. During this fiscal year, RPCI exceeded its goal of 30 percent, purchasing 35.1 percent of Institute-procured goods and services from minority- or women-owned business enterprises (MWBE).