# Retreat Expands Framework for the Future: Basic Sciences Research Division at the Lurie Cancer Center

A recent strategic planning retreat brought leaders from the Basic Sciences Research Division’s four programs together to exchange ideas and discuss ways to build on the Lurie Cancer Center’s existing strengths to advance leading-edge scientific research and impact outcomes.

Led by Kathleen Green PhD, Associate Director for Basic Sciences Research, and Lurie Cancer Center Director, Leonidas Platanias, MD, PhD, the retreat also included our philanthropic partners at The H Foundation whose funding accelerates discoveries through laboratory-based research.

This inaugural retreat provided a valuable opportunity to focus on the Lurie Cancer Center’s mission to overcome cancer by expanding opportunities for engagement, innovation and collaboration across Northwestern. Major emphasis was placed on considering ways of restructuring the Basic Science Programs to leverage new concepts in cancer biology and state-of-the-art technologies that drive progress in cancer research.

Retreat participants also discussed strategies for fostering interactions with clinical programs and Northwestern Medicine Developmental Therapeutics Institute (NMDTI) to strengthen the pipeline that delivers discoveries at the bench to the bedside.

## Thank You for Celebrating With Us!

THE COLDEST Cancer Survivors’ Celebration Walk & 5K in 22 years was no match for the warmth and spirit in Chicago’s Grant Park on May 31. Did we mention the rain? Or the wind? It didn’t discourage the cancer survivors & supporters who gathered for the largest survivorship celebration in the country!

Thanks to your efforts, 70 teams and 4,542 participants raised more $228,000 to advance innovative research and programs at the Lurie Cancer Center.

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Digital edition

Back issues available at:
cancer.northwestern.edu/newsletter
Bacterial Sepsis Protein May Inhibit Cancer Cell Growth

A TOXIN secreted by Vibrio vulnificus, a water- and food-borne bacteria that can cause rapidly lethal infections in persons with liver disease, has potential to prevent the growth of tumors, according to a new study published in *Nature Communications*. Lurie Cancer Center member, Karla Satchell, PhD, professor in Microbiology-Immunology at Feinberg and her team demonstrated that a multifunctional-autoprocessing repeats-in-toxin (MARTX) protein from Vibrio vulnificus can inhibit tumor cell growth by cutting the protein Ras.

This protein is central to cell division and survival, and mutations in the gene that codes for Ras are a common cause of human malignancies. "Ras is important for cell proliferation in cancer, so the toxin could potentially be developed as a treatment for different types of tumors," said Satchell. "It has been known that Ras has a role in cancer development and targeting Ras has been one of the hardest challenges of cancer research and drug discovery."

Ras also plays a role in detecting pathogens and activating an immune response. The bacterium uses the MARTX toxin protein to inactivate Ras, increasing its own virulence and allowing it to spread throughout the host. They used cell biological, genetic and biochemical techniques to show how a specific part of the toxin, an effector domain called DUF5Vv, targets and cleaves Ras. Satchell’s team also revealed the ability of this domain to slice both normal and mutant forms of Ras commonly found in cancers.

Centriole Finding Expands Knowledge of Cancer Cell Biology

A NEW STUDY coauthored by Northwestern Medicine scientists has found that normal cells stop proliferating when they lose important intracellular structures called centrioles, but cancer cells continue to multiply.

The paper, published in *Science*, settles an old debate about the role these structures play in cancer. Previously, many cell biologists thought that blocking centrioles from forming could stop cancer growth, because many advanced cancers have too many centrioles (a normal human cell has two; together they make up the centrosome.)

“The regulation of centriole duplication has been the subject of intense investigation by many groups,” said coauthor Brian Mitchell, PhD, assistant professor in Cell and Molecular Biology at the Feinberg School of Medicine and a member of the Lurie Cancer Center. “It was a very surprising finding that normal but not cancer cells were blocked from dividing.”

In the study, scientists from the Ludwig Institute for Cancer Research developed a small molecule compound called Centrinone that inhibits Plk4, a protein kinase that regulates centriole assembly. Mitchell’s lab conducted the first in vivo analysis of Centrinone, showing that the compound inhibits centriole formation in ciliated epithelial cells.

“This compound is destined to be the standard in the field that will allow a detailed analysis of Plk4 in numerous contexts that were previously untenable due to the importance of this protein for cell survival,” Mitchell said.
Wayne Named Associate Director for Clinical Affairs

JEFFREY WAYNE, MD, has been appointed Associate Director for Clinical Affairs at the Lurie Cancer Center and Medical Director for Northwestern Medical Group (NMG) Oncology, positions he has served in interim since January. Wayne, an Associate Professor of Surgical Oncology and Dermatology, is also Chief of Melanoma and Soft Tissue Surgical Oncology at Feinberg.

As Associate Director for Clinical Affairs, Wayne will be responsible for ensuring that the Clinical Cancer Center facilities and programs are fully integrated with and support the mission of the Lurie Cancer Center. He will serve on the Executive Committee and in the cancer center Leadership Group, playing a critical role in establishing the strategic direction, policy and priorities of the Lurie Cancer Center.

“Jeff is a respected clinical and academic leader,” said Lurie Cancer Center Director, Leonidas Platanias, MD, PhD. “He will provide important leadership in the clinical operations of the Lurie Cancer Center and play a key role in our efforts to align the oncology programs across Northwestern Medicine.”

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Gius Named Co-Leader Women's Cancer Research Program

DAVID GIUS, MD, PhD, has been named Co-Leader of the Women’s Cancer Research Program at the Lurie Cancer Center, a position he has served in interim since February, 2014.

Gius, a nationally recognized radiation oncologist and researcher, is a Professor in the Department of Radiation Oncology at Feinberg. In collaboration with Co-Leader Seema Khan, MD, he will continue to increase the Women’s Cancer Research Program’s translational research activity.

The Women’s Cancer Research Program (WCRP) embraces a multidisciplinary approach to integrate its basic, translational, and clinical components. The program seeks to define the common mechanisms responsible for the risk and progression of tumors arising from the reproductive tissues of women including the breast, ovary, endometrium, myometrium, uterine cervix and vagina. In doing so, the goals of the WCRP are to identify molecular markers that contribute to the disease process and outcome, to develop targeted molecular approaches, and to translate these agents from pre-clinical models to the bedside.

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Northwestern Receives $800,000 from AVON 39

THE 13th ANNUAL AVON 39 The Walk to End Breast Cancer, held in Chicago June 6-7, raised $5 million to accelerate breast cancer research; improve access to screening, diagnosis and treatment; and educate people about breast cancer. Two grants totaling $800,000, will support research and programs at Northwestern Medicine and the Lurie Cancer Center.

Northwestern Medicine, the AVON 39 Chicago’s medical sponsor, received a grant of $500,000 to support access to care through the Erie Family Health Center and Northwestern Memorial Hospital, as well as research projects studying obesity as a risk factor for breast cancer. The Lurie Cancer Center also received a grant of $300,000 to support a clinical trial led by Cesar Santa-Maria, MD, studying ways to use a patient’s immune system to fight metastatic breast cancer.

» Read more
Perlman Named Director of Flow Cytometry Core Facility

Harris Perlman, PhD, Solovy/Arthritis Research Society Professor of Rheumatology at the Feinberg School of Medicine, has been named Director of the Lurie Cancer Center’s Flow Cytometry Core Facility.

The Flow Cytometry Core Facility provides investigators with comprehensive flow cytometry and cell sorting services; supporting enhanced scientific interaction and productivity within the Lurie Cancer Center and affording access to reliable, quality-controlled, specialized technology in a cost-effective manner. The facility serves as a focus for investigators interested in cellular based measurements and cellular heterogeneity in disease.

In his role as Director, Perlman will be responsible for the technical oversight and management of the core facility, as well as new assay development and advising investigators on experimental design, data analysis and data interpretation. He will replace William Karpus, PhD, Professor of Pathology and Microbiology-Immunology at Feinberg and Associate Dean for Student Affairs of the Graduate School of Northwestern University.

“Over the past several years, my laboratory has devised cutting edge protocols and techniques for advancing flow cytometry. I am excited to provide novel, state of the art techniques to analyze complex tissue samples from patients and model organisms at a single cell level for the Northwestern Medicine community,” said Perlman, a member of the Lurie Cancer Center.

“We are excited to have Harris Perlman assume the leadership of the flow cytometry core,” said Milan Mrksich, PhD, Associate Director for Research Technology and Infrastructure at the Lurie Cancer Center. This core is central to cancer researchers across Feinberg and under the guidance of Dr. Karpus, the core has become one of the most highly ranked by its users. We are confident that Dr. Perlman, with his years of experience managing a cytometry core at Saint Louis University, will lead the core into a new generation of automated instruments.”

Read more

A Campaign to Save Lives Has Launched

An impressive and inspiring kickoff event officially launched the “Campaign to Save Lives,” a fundraising initiative to establish the Leukemia Translational Research Program at the Lurie Cancer Center.

Read more and view photos
Vadim Backman, PhD, the Walter Dill Scott Professor of Biomedical Engineering at the McCormick School of Engineering and Applied Science, has been named the 10th recipient of the Dorothy Ann and Clarence L. Ver Steeg Distinguished Research Fellowship Award. The Ver Steeg Fellowship supports research and scholarship by a tenured Northwestern professor whose work enhances the national and international reputation of the University. It carries an award of $38,000.

Backman has discovered new approaches to examining cell nanoarchitecture and molecular events in carcinogenesis. In turn, these innovations have led to new methods for detecting, screening and diagnosing cancer, potentially making it possible to eradicate the disease before the patient begins to display symptoms.

“The Ver Steeg Fellowship is a prestigious honor for myself as well as for my lab,” Backman said. “It also provides a critical but often overlooked part of the early research process: financial support.

» Read more

June McKoy, MD, JD, MBA, Associate Professor of Medicine and Preventive Medicine at Northwestern University Feinberg School of Medicine, and Director of Geriatric Oncology for the Lurie Cancer Center, has been selected by National Cancer Institute (NCI) Director, Douglas Lowy, MD, to join the Council of Research Advocates (NCRA). NCRA members are chosen for their expert knowledge of issues of importance to the cancer research community.

Joan Guitart, MD, has been named Secretary and President-elect of the International Society for Cutaneous Lymphoma (ISCL), a worldwide association founded to increase knowledge of lymphoproliferative and related disorders of the skin.

Guitart is Professor of Dermatology and Pathology at the Feinberg School of Medicine, Director of the Skin Cancer Institute within the Lurie Cancer Center, and a member of Northwestern Medicine's Skin Disease Research Center. Recognized internationally as a model for patient care, the Lurie Cancer Center’s Cutaneous Lymphoma Clinic offers a weekly multi-specialty approach to patients with cutaneous or B-cell lymphomas.

Peng Ji, MD, PhD, Assistant Professor of Pathology at Feinberg, was recently honored with one of the American Society of Clinical Investigation’s (ASCI) 2015 Young Physician-Scientist Awards. He is one of only 40 investigators nationwide to receive the honor this year.

Ji has made significant contributions in the fields of pathology and hematology. In a recent paper published in Blood, Dr. Ji and his colleagues discovered several genetic mutations associated with the development of Myelodysplastic syndromes (MDS), a group of diseases that affect bone marrow and lead to ineffective production of stem cells that become blood cells.

» Read more
THE LURIE CANCER CENTER is committed to educating the public about cancer prevention and treatment, and offers a wide range of community events and patient programs throughout the year. Below is a list of programs scheduled through August 2015.

LEARN MORE AND REGISTER AT cancer.northwestern.edu or call 312.695.1390

Skin Cancer, Sun Protection & Skin Growths

Wednesday, July 15
Feinberg Pavilion, Pritzker Auditorium

Mary Martini, MD, Director of the Lurie Cancer Center’s Multidisciplinary Melanoma Program, will discuss steps to help avoid and detect skin cancer.

Multiple Endocrine Neoplasia (MEN) Patient & Family Seminar

Saturday, July 25
Prentice Women’s Hospital
Conference Room L

Experts from the Lurie Cancer Center discuss a wide range of subjects at this half-day educational program presented in partnership with American Multiple Endocrine Neoplasia Support.

Head & Neck Cancers: Not Just Smokers

Wednesday, August 12
Feinberg Pavilion, Pritzker Auditorium

Sandeep Samant, MD, Director of the Northwestern Medicine Head and Neck Center, explains the risks for developing head and neck cancers, symptoms, treatment options, and preventive measures.

Cancer Connections

Saturday, July 25
Prentice Women’s Hospital

Tools, techniques and services to help patients and families move forward during and after cancer treatment. Topics for July’s interactive program include:

• The Role of Food in Cancer Treatment
• When You or Someone You Love Has Advanced Cancer
• Finding Your New Normal
• Exercising Safely Through Cancer
The H Foundation's Goombay Bash
Saturday, July 18
Navy Pier Chicago, Grand Ballroom
The H Foundation's Caribbean-themed party features live music and entertainment, great food, and a live and silent auction. Proceeds benefit basic science investigations at the Lurie Cancer Center.

Chicago SUP YACS Classic
Sunday, July 26
Montrose Beach
Stand up for Young Adult Cancer Survivors (YACS) with standup paddle board (SUP) races, relays and family-friendly activities at Montrose Beach.

Gold Coast Grub Crawl
Wednesday, July 29
1120 N State St.
A big night of small bites and trend-setting drinks to benefit Northwestern Brain Tumor Institute.

Cuisine for Cancer
Friday, August 7
Morgan MFG, 401 N. Morgan St.
Enjoy an unforgettable evening of food, fun and fundraising for cancer research and support!

Brett Armin Sarcoma Foundation Golf Outing
Friday, August 28
Seven Bridges Golf Course, Woodbridge
The annual event honors the memory of Brett Armin while supporting sarcoma research at the Lurie Cancer Center.
THROUGHOUT THE YEAR, the Lurie Cancer Center offers professional education on various cancer-related topics. Below is a list of programs scheduled through September 2015.

LEARN MORE AND REGISTER AT cancer.northwestern.edu or call 312.695.1391

Oncology Review
Coverage from the 2015 ASCO Annual Meeting
Friday, July 10
Feinberg Pavilion, Mecklenburg Conference Room A

Chair: William Gradishar, MD

Plasma Derived Exosomes as a Reservoir of Biomarkers for Leukemia Patients Stratification
Thursday, July 16
Robert H. Lurie Medical Research Center
Searle Conference Room

Speaker: Prof. Raffaele A. Calogero
University of Turin, Italy

CANCER CONNECTIONS
Persistent Pain Syndromes Due to Cancer Treatment
Saturday, July 25
Prentice Women's Hospital, Conference Room L
Speaker: Judith Paice, PhD, RN

H Foundation Basic Science Symposium
Epigenetics and Cancer
Thursday, September 17
Northwestern Law, Thorne Auditorium

Keynote:
Roger Kornberg, PhD
Stanford School of Medicine

Co-Chairs: John Crispino, PhD
Jindan Yu MD, PhD
Jason Brickner, PhD

Grand Rounds & Tumor Cell Biology Seminars

Grand Rounds & Tumor Cell Biology Seminars are held weekly during the academic year, and will resume in September. The schedule will be posted at cancer.northwestern.edu in August.

Save the Date

17th Annual Lynn Sage Breast Cancer Symposium

A FORUM FOR discussing and presenting laboratory and clinical research concerning the care of patients with breast cancer chaired by William Gradishar, MD. Co-Chairs are V. Craig Jordan, OBE, PhD, DSc, Monica Morrow, MD, and Nora Hansen, MD. Topics include everything from Supportive Care Issues, Breast Pathology for the Non-Pathologist, Employing Molecular Medicine in the Clinic, and Challenging Clinical Cases.

The Lynn Sage Breast Cancer Symposium, held October 29 - November 1 at the Fairmont Chicago, is proud of its tradition of attracting a faculty of experts from around the world.

View the agenda and register today at lynnsagebreastcancer.org
Funding Opportunities

Travel Grants

Travel Fellowship Awards

The Katten Muchin Rosenman Travel Scholarship Program allows doctoral students and postdoctoral fellows to present the results of their basic cancer research.

The Center for Genetic Medicine Travel Fellowship allows doctoral students and postdoctoral fellows to present the results of their basic cancer research showing its genetics relevance.

The Cancer Prevention Travel Scholarship Program allows doctoral students and postdoctoral fellows to present the results of their laboratory, clinical, population or behavioral research with implications for cancer prevention.

The next available Travel Fellowship Award application deadline is November 6, 2015.

» Details and application here

Basic Sciences Research Division

H Foundation NCI Stimulus provides $20,000 of support to projects to stimulate grant applications to the National Cancer Institute (NCI).

Applications are reviewed on a rolling basis and accepted until funds for the year are expended.

» Details and application here

Lea Charitable Trust Equipment Grants

Through the generous support of the Lea Charitable Trust, a pool of funds is available to full members of the Lurie Cancer Center affiliated with one of the Basic Sciences Research Programs for use by multiple investigators or to support small equipment grants for collaborative research projects.

Grants are made on a rolling basis as funds become available.

» Details and application here

Northwestern Institute for Comparative Effectiveness Research in Oncology (NICER Onc) Research Support

This call for proposals for outcomes, comparative effectiveness studies, and/or quality improvement initiatives to be completed in collaboration with NICER Onc is an opportunity to obtain research resources for faculty who have a research idea, but may not have the time or in-depth knowledge of programming/analytics/decision models/surveys/etc. to complete the study on their own.

Deadline is August 14, 2015.

» Details and application here

Prostate SPORE Developmental Research Program

The Developmental Research (pilot) Program supports innovative research initiatives by providing seed money through the funding of pilot projects.

» Details & application here
Welcome

New Members

Ankit Bharat, MD, is Assistant Professor of Thoracic Surgery at Feinberg and the Surgical Director of Lung Transplant. The goal of his research is to understand the mechanisms of lung healing following surgery for lung cancer. In addition, Dr. Bharat is developing a new biomarker for lung cancer screening.

Contact Dr. Bharat at ankit.bharat@northwestern.edu or 312.695.4630

Mary Ann Gerend, PhD, is Associate Professor of Medical Social Sciences at Feinberg. Her research interests are in cancer prevention with special emphasis on cancers caused by human papillomavirus (HPV). For the past decade she has been investigating how young adults and parents make decisions concerning HPV vaccination. She is currently the principal investigator of an NCI-funded longitudinal study aimed at identifying facilitators and barriers to completion of the 3-dose HPV vaccine series among low-income Hispanic adolescents. Beyond HPV vaccination, Dr. Gerend has research interests in overuse of cancer screening and cancer-related health disparities.

Contact Dr. Gerend at mary.gerend@northwestern.edu or 312.503.7116

Dai Horiuchi, PhD, is Assistant Professor of Pharmacology at Feinberg. The major focus of his research is on the mechanisms of tumor maintenance and progression in breast cancer and to identify novel therapeutic targets and treatment strategies. To achieve these goals, Dr. Horiuchi's lab utilizes a collection of human breast cancer cell lines, preclinical animal models, and high-throughput screening approaches along with state-of-the-art bioinformatics through collaboration with experts in the field.

Contact Dr. Horiuchi at dai.horiuchi@northwestern.edu or 312.503.4085

Karla Satchell, PhD is Professor of Microbiology-Immunology at Feinberg. Her research examines the molecular mechanism of bacterial protein toxins. In the course of this work, Dr. Satchell recently discovered a novel effector domain that carries out site-specific processing of the protein Ras. Her lab is working now with members of the cancer center to develop this novel enzyme as a therapeutic for treatment of solid tumors.

Contact Dr. Satchell at k-satchell@northwestern.edu or 312.503.2162

Eytan Szmulowicz, MD, is Assistant Professor of Hospital Medicine and Director of the Section of Palliative Medicine at Feinberg. He has developed and studied palliative care curricula for oncologists, hospitalists, residents, nurses, and medical students, with particular focus on teaching challenging patient-clinician communication skills. Since 2011, he has been the PI for PREP-CPC (Preventing Readmissions through Effective Partnerships– Communication and Palliative Care), an Illinois statewide quality improvement initiative focused on general palliative care and advance care planning.

Contact Dr. Szmulowicz at e-szmulowicz@northwestern.edu or 312.926.0001

A. Charlotta Weaver, MD, is Assistant Professor of Hospital Medicine at Feinberg. She is Unit Medical Director for Oncology Hospitalists and Associate Program Director for the Division of Hospital Medicine. Dr. Weaver is PI of a grant to improve quality of inpatient cancer care. Her research is focused on improving teamwork, communication, and engagement on the inpatient oncology units, and collaborating on efforts to improve guidelines adherence and reduce unnecessary treatment among hospitalized cancer patients.

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New Staff

New Staff

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Help Wanted:
Reporters

PLEASE SEND SUGGESTIONS for this newsletter to Jennifer Bowker,
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Lurie Cancer Center Weekly Updates

INFORMATION TO BE CONSIDERED for inclusion in the Lurie Cancer Center’s weekly e-mail updates must be received at least two weeks in advance. Submit suggestions to Denise Marshall at d-marshall4@northwestern.edu.

Read The Cancer Letter Wherever You Are

THE CANCER LETTER, an award-winning weekly newsletter providing the latest on cancer research funding, legislation, policy issues, drug development and people in the news, is available to all faculty and staff using northwestern.edu and nm.org e-mail addresses.

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